

# THE IRON AGE

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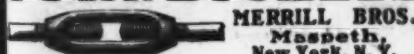
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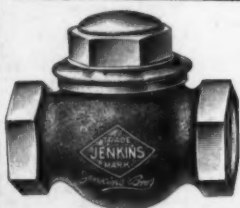
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# THE IRON AGE

New York, Thursday, February 18, 1909.

## The Curtis Electric Car Truck Plant.

The product of the new works of the Curtis Motor Truck Company at Decatur, Ill., includes trucks of various capacities and dimensions for interurban, elevated, subway and surface electric cars, and the capacity is 10 trucks per day. Spurs connecting the works with the Illinois Central, Pennsylvania, Wabash, and Cincinnati, Hamilton & Dayton railroads, as well as the belt line of the Illinois traction system, afford excellent shipping facilities. The buildings, a plan of which is shown in Fig. 1, at present occupy a site of 10 acres, which can be extended when required. The plan also shows the arrangement for the handling of material, which has been designed to avoid any unnecessary handling from the

the air line to permit continuous operation without drop of pressure. No. 8 Ajax bulldozer (13), weighing some 30 tons, is used for the heavy bending and up-setting work up to 8 x 2 in. This machine has a full equipment of forms and attachments for all of the operations adapted to it. It is operated by a 25-hp. motor with its starting box mounted direct on the machine, and has convenient levers for operating the clutches so it can be operated with equal facility from either side. The cross-head can be stopped and reversed. No. 4 Ajax bulldozer (21), is used for the lighter work, having a capacity of 4 x 1 in., and being equipped with forms for work within its capacity. It is operated by a 5-hp. motor mounted with starting box on the machine, and the clutches can be operated from either side. 400-lb. American steam hammer (23), is used for the light forging work and can be operated by treadle. Compressed air is used for its operation, and its foundation is crib work of timbers. No. 5

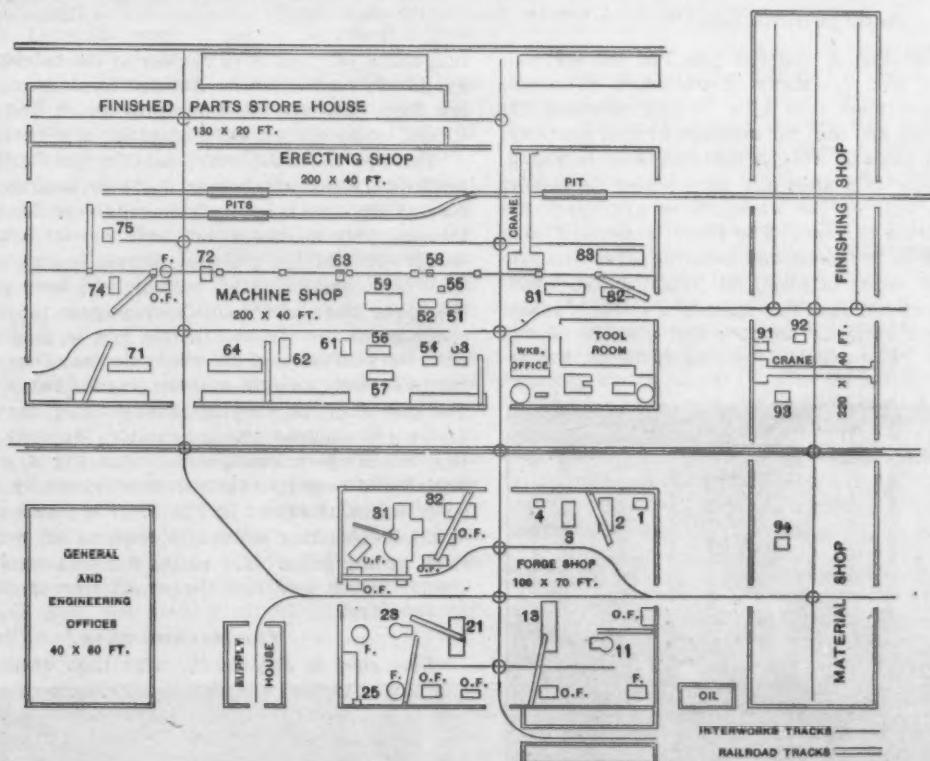


Fig. 1.—Plan of the Works of the Curtis Motor Truck Company, Decatur, Ill.

receipt of the raw material to the shipping of the finished trucks.

All buildings are fireproof, with heavy steel frames and walls of concrete and brick.

### The Forge Shop.

is 70 x 100 ft. Heavy foundations are provided for all of the machines, and around them is a specially tamped floor of cinder composition. In this shop all of the forging and bending work is done, for which purposes there are installed the following machines. The locations are indicated in the plan by the numbers appearing here in parentheses:

No. 11 Geo. Whiting special shear and die cutting machine (2), with a capacity of 1 x 8 in. bars and having special attachments for plate splitting and punching such as is done on the pedestal plates, as well as special devices for other operations. The machine can also be used for punching. It is operated by a 5-hp. motor mounted on the machine with its starting box. No. 6 Geo. Whiting punch (3), with a capacity of  $\frac{3}{4}$  x  $\frac{3}{4}$  in., is used for punching work such as is done on the pedestal plates, and special tools are included for other operations. The machine is operated by a 3-hp. motor mounted on the machine with its starting box. 1100-lb. American steam hammer (11), has a capacity for the plain forging work done upon the truck parts. The foundation of this machine is a crib work of timbers combined with concrete. In place of being operated by steam, the hammer is operated by compressed air and has storage tank in

Ransom double emery grinder (4), for 16-in. wheels, and fitted with protective guards, is used for rough grinding and tool sharpening, according to the wheel. Driven by a 5-hp. motor with starting box lever on machine. 4-in. Ajax forging machine (31), with special clearance in die spaces for large work, is used for making forgings of truck parts. A full line of tools, forms and dies is included in the equipment of the machine, so all parts that can be made to advantage are produced upon it. The machine is operated by a silent chain drive from a 25-hp. motor, having its starting box mounted direct on the machine. A bolt heading machine for making small parts, pins and bolts and the less difficult forged pieces, is a part of the equipment of the shop. Oil furnaces (O. F.) serve all of the machines using heated material and are located at points convenient so there is no loss of heat in operations. Forges (F) for open forge heating are located at different points. Jib cranes (indicated) are placed to serve all machines and furnaces and are equipped with hoists and special grapple hooks for different sizes and shapes of material. A Gilbert & Barker fuel oil system (1), with 20-hp. motor, supplies the furnaces with low pressure air and fuel oil. A storage capacity of 10,000 gal. of fuel oil is furnished by tanks outside the building. Draft for forges is furnished by an American forge blower and motor (25).

Because of the weight of materials handled in the forge shop it was important to have more than the ordinary complement of hoisting and transporting appliances. These are provided in the interworks tracks and the jib cranes and hoists of various capacities, as is well shown not only in the plan, Fig. 1, but also in the general view



Fig. 2.—A General View in the Forge Shop.

in the forge shop, Fig. 2, and the detail of the transom forging machine, Fig. 3. Many of the truck parts are formed and forged upon this Ajax forging machine. It is fitted with forms and dies for making parts in quantity. Its most difficult piece of work is that indicated in Fig. 3. The truck transom is a steel bar with plates formed at each end which bear upon the wheel pieces and carry the car body load direct to them. The truck transom, as has been shown by test, in tensile and shearing strengths provides a factor of safety of about 30. This, while unusually high, is considered desirable inasmuch as the transom is the direct load carrying member and absolute safety depends upon it. The material heating furnaces, the ar-

range of them with respect to the machines, and the appliances for cooling the finished forgings without changing their form are other features which had to be given special consideration in a plant of this character.

Perhaps the most novel part in the Curtis all-forged truck is the pedestal. It is made without castings, being formed of steel plate. The car body load is carried through four springs about each journal box, direct and independent of the pedestal plates, to the wheel pieces. This is accomplished by having steel bars which act as the upper slabs of the coil springs pass through punched openings in the pedestal plates and have direct bearing with the underside of the wheel pieces. Thus the pedestal plates act only as guides to the journal boxes in their rise and fall with the varying conditions of the track. The plates are sheared and punched to finished shape with jigs, which operations are shown in Fig. 4, and are then heated and bent into their finished shape by special bulldozer forms as shown in Fig. 5. The forms are designed to do the bending without stretching or weakening the stock at any point. The plates can be assembled without special fitting, and reaming or drifting of rivet holes is unnecessary.

#### The Machine Shop.

This shop is 40 x 200 ft., with high open head room, and is well lighted and ventilated. No artificial illumination is required except at night. Shed structures connect the buildings so that communication is possible in all kinds of weather, and protection is afforded the tracks, compressed air pipes and wiring connections between them. The floor of the machine shop is of concrete and the interworks tracks have their metal ties imbedded in it. The floor is unobstructed and movement of material even across the tracks is not difficult. Included in the machine shop equipment are the following, designated as before by corresponding numbers on the plan, Fig. 1:



Fig. 3.—A Forging Machine Making Truck Transoms.



Fig. 4.—Punching and Shearing Pedestal Plates.



Fig. 5.—Bending and Forming Pedestal Plates.



Four 26-in. Barnes-drills (51-54), belt-driven from counter, with 10-hp. motor, each with a capacity of drilling up to 2½ in. with high speed drills. For rapid drilling work, oil compound from a gravity system is supplied to each machine. 20-in. four-spindle Barnes gang drill (56), with automatic approach, quick return and back geared, belt driven from counter. Used for small drilling work with jibs, such as bolts and pins. 20-in. Bogert turret lathe (57), with outfit of tools for making bolts and pins in quantity, with a capacity of rod up to 2½ in. Machine is belt driven from counter. 1½-in. Reliance triple bolt cutter (61), with chucks, taps, dies and special tools, for threaded work to the capacity of the machine. Belt driven from counter. 24-in. Rockford shaper (62), back geared and equipped with full line of small tools, used for the regular line of shaper work and tool making. Belt driven from counter with 10-hp. motor. 24 in. by 14 ft. Lodge & Shipley patent head lathe (64), with taper attachment and back geared. Used for general work. Belt driven from back geared, variable speed counter, with 10-hp. motor. 30 x 30 in. by 8 ft. Cincinnati heavy duty planer (71), with 10-hp. motor, direct connected through a variable speed gear box for adjustable cutting speeds, two rail heads and power lift. Used for all heavy planer work. No. 5 Ransom double emery grinder (63), fitted with protective guards and uses 16-in. wheels of different grades for the special work done. Driven by 5-hp. motor, with starting box lever on machine. Q. M. S. automatic saw grinder (58), is used for cold saw sharpening and is belt driven from counter. Yankee drill grinder (55), is used for sharpening high speed drills and is belt driven from counter. A multiple drill (59), wheel boring machine (81), axle lathe (82), and wheel press (83), direct connected with motors are a part of the equipment of the shop. Jib cranes (indicated) with hoists, serve all machines and interworks tracks (indicated) reach all points. A traveling crane (indicated) handles material in quantity.

A general view in the machine shop is shown in Fig. 6. The tools here installed were selected for their particular work and not expected to be of a wide range of capacity nor to be used for miscellaneous work. Every endeavor has been directed toward the most economical production of the one line of work—truck parts. Templates and gauges are used throughout and special jigs and tools wherever they may be called for, interchangeability being a very important, if not the most important, consideration. An example is the drilling of truck corners, illustrated in Fig. 7. There is an unusual equipment of small tools, especially such as high speed drills and reamers, which are used in drilling with jigs and fitting machine bolts. The interchangeability so simplifies the assembling and the erecting that time and cost are very materially reduced. Large numbers of the parts are also adapted to trucks of different types, so that there is not the expense of so great an assorted production as would attend the making of all parts of any one type, special to that type. For the making of certain parts special machines are employed, including those for making bolts and pins, the drilling of cotter pin holes, the threading of turnbuckle screws, &c.

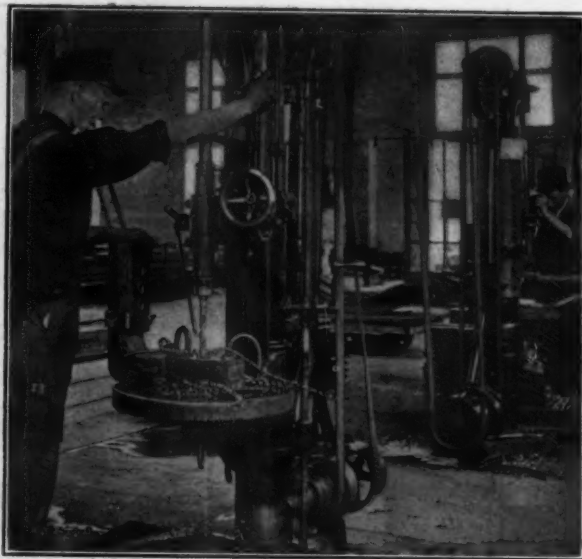


Fig. 7.—Drilling Truck Corners with a Jig.

#### The Erecting Shop.

This is a bay of the building occupied by the machine shop and is also 40 x 200 ft. A crane runs its length, serving all parts of the floor. The railroad tracks that enter the building and the erecting tracks of different gauges are placed upon timbered concrete foundations, and the remainder of the floor is concrete, flush with the track. The interworks system extends into this shop, reaching all parts and connecting it with the other building. In addition to the system of erecting tracks, with their pits, and the interworks track, the traveling crane handles assembled work and erected trucks. It is a Northern crane equipped with alternating current motors and has a capacity of 7½ tons, a span of 40 ft., and a runway length of 200 ft. The trolley has a 2½-hp. motor, the bridge a 10-hp. motor and the hoist a 21-hp. motor, all of Wagner make, as are all of the driving motors throughout the shops. The crane has cage control and is fitted with Cutler-Hammer controllers and electric brakes. For light hoisting air hoists are used. The other machinery in this shop includes the following:

A 30-ton and two 70-ton Hanna riveters (72-74-75), air operated with the special feature of maximum pressure the last ¼ in. of stroke, are used upon the riveting work of trucks. The shop is fitted with forges (F) for rivet fires and also has an oil furnace (O. F.) for heating rivets. The usual equipment of

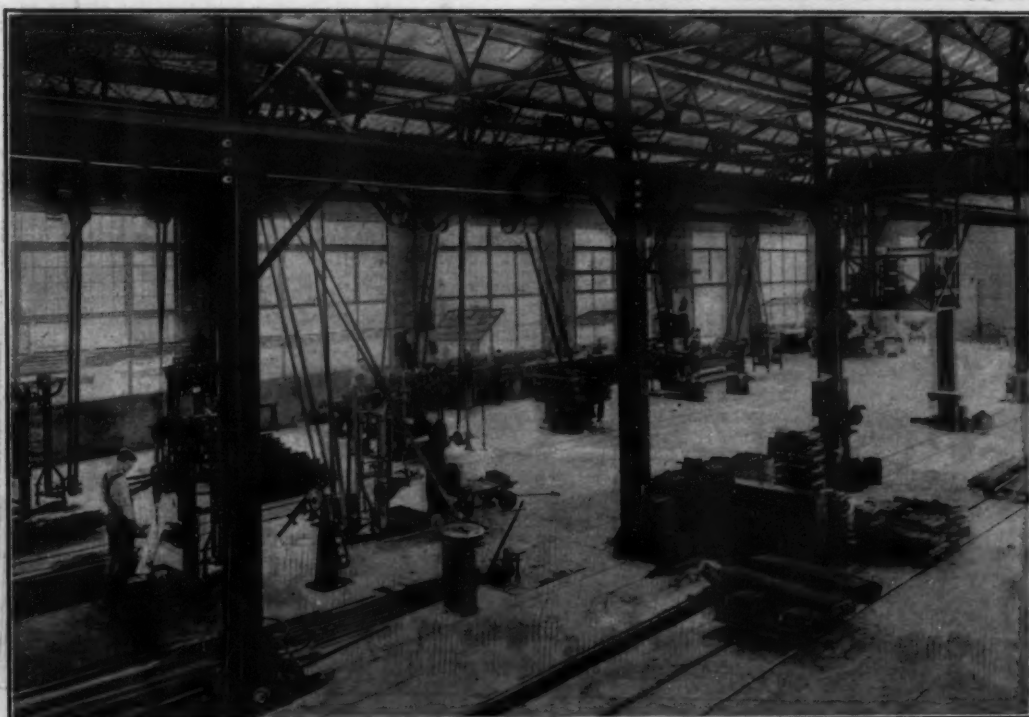


Fig. 6.—A General View in the Machine Shop.

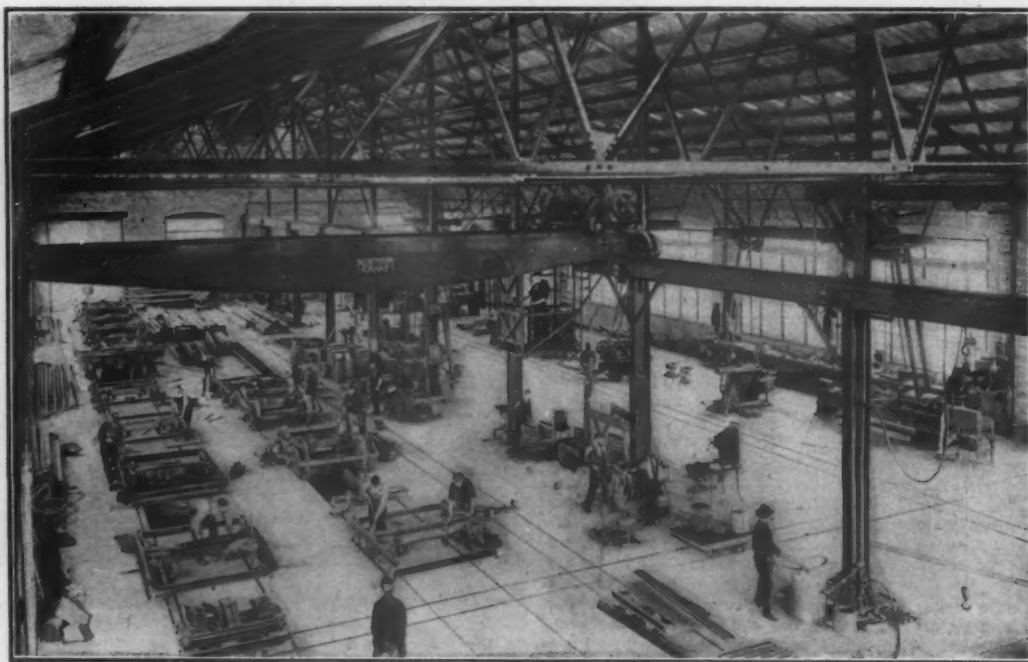


Fig. 8.—A General View in the Erecting Shop.



Fig. 9.—Assembling Side Frames.

small tools, including a number of air tools for various operations, is to be found in the shop.

A general view in the erecting shop is shown in Fig. 8, and the assembling of side frames in Fig. 9. The remarkable thing of the product is that there are no castings entering into it. It may have been noticed that the plant is without a foundry. The particular service required of car trucks is such that an all-forged frame has its advantages, and in case of accident the parts instead of being broken will be bent out of shape, and can be more easily repaired than a new casting could be obtained and applied.

#### The Material and Finishing Shops.

These together occupy a building 40 x 220 ft., and are served by a traveling crane. In the material shop the open hearth steel and wrought iron is received as raw material, and is cut roughly to dimensions before being distributed. There is no machinery in the finishing shop, and that in the material shop includes the following:

A No. 20 Lea simplex cold metal saw (83), with a capacity of cutting 20 in. wide by 6 in. thick. A supply of saws is provided so the machine can be operated constantly. The machine is driven by a 3-hp. motor and has a starting box with a lever on the machine. A friction saw (94) for cutting several pieces of material at the same time where the size is uniform; straight-



Fig. 10.—A General View in the Material Shop.



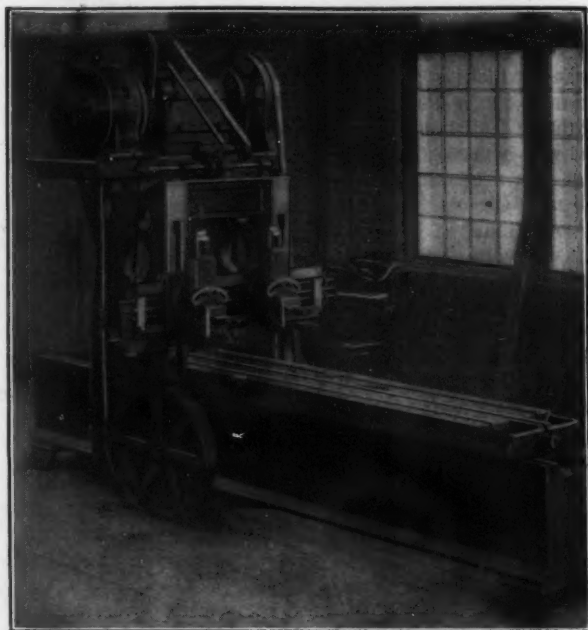


Fig. 11.—Motor Drive on a Planer.

ening rolls (91) and a straightening press (92) for material that enters the truck without forging work being done upon it, all are a part of the equipment of the shop.

In the material shop are provided special racks for storing the lighter material, so that it may be inspected and kept in order without extra labor. The cars can run directly into this shop, as shown in the view in the finished part stock in the material shop, given in Fig. 10.

In the finishing shop special devices are used for cleaning the erected trucks before painting. The parts that are not easy of access of the finished truck are painted before assembling. There is ample room in this shop to handle trucks, giving them plenty of time to dry.

#### The Power Supply.

Electric power from the high tension lines of the Illinois Traction system is used for operating the works. The current is transformed from 33,000 to 440 volts at which pressure it is distributed. It is three-phase 25-cycle alternating current. All machines that can be driven to advantage by individual motors are so equipped, and the motors are placed on the machines in a compact way. Where belt driving is best short sections of line shafting supported on the steel frame of the buildings are driven by motors of ample power for all units connected. Examples of motor drive in the shops are shown in the other illustrations. Fig. 11 shows a direct motor drive on a planer, Fig. 12 a direct motor drive on a bulldozer and Fig. 13 one on a shear where belt connection is used. Motors to the extent of 200 hp. are now in operation, ranging in size from small motors that operate single emery grinders to one of 60 hp. which drives an air compressor. Steam hammers, riveters, hoists and air tools require a considerable capacity of compressed air. An Ingersoll-Rand two-stage air compressor of 350 cu. ft.

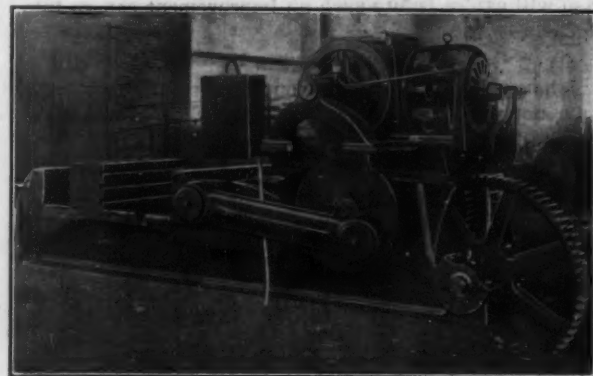


Fig. 12.—A Direct Motor Driven Bulldozer.

per minute capacity, driven by the motor just mentioned, is the source of this air. The compressor is fitted with a special cylinder cooling system to allow constant operation. The pipe distributing system affords attachments to hoists and tools at a large number of convenient points, so that the work does not have to be moved about to obtain a source of power. Compressed air is also used in sand blast devices to clean the scale and dirt from the assembled and erected trucks before they are given the protective coats of color and varnish.

#### The New England Foundrymen's Association.

The New England Foundrymen's Association departed from the routine of its meetings by gathering at The Elton, Waterbury, Conn., February 10. There was a large attendance, 100 being present at the dinner. President W. A. Viall presided. At the business meeting the president announced the death of Herbert J. Burroughs of the Builders Iron Foundry, Providence, and a committee consisting of Henry A. Carpenter, A. J. Miller and Theo. Colvin was appointed to prepare resolutions. Wonham & Magor, Boston, Mass., and Baxter D. Whitney & Son, Winchendon, Mass., were elected to membership. L. N.

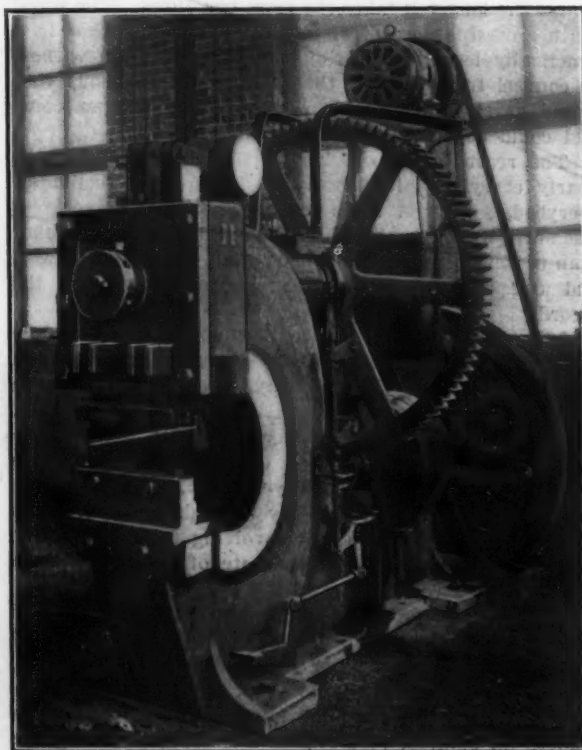


Fig. 13.—Belted Motor Drive on a Shear.

Perrault, Waterbury Castings Company, chairman of the Committee of Arrangements for this meeting, was the toastmaster at the dinner, and the speakers were President Viall, F. B. Farnsworth, McLagon Foundry Company, New Haven; W. R. Webster, Bridgeport Brass Company, Bridgeport, Conn., and W. H. Carpenter, Bristol Brass Company, Bristol, Conn. The two last named took the brass business as their subject.

Reporting concerning the Tata Iron & Steel Company of India, a description of whose plans for iron and steel works was given in *The Iron Age* of July 12, 1906, Consul-General Wm. H. Michael, Calcutta, India, says that 4000 men have been at work for some time on the site selected. American engineers are in charge, and the construction work is on the lines originally laid out by Charles P. Perin, New York, C. M. Weld and their associates. The ore in the company's Ramrana property has proved to be highly valuable and the coal and limestone properties are being developed. It is expected that rails and other products will be manufactured by the end of 1910.

## The Trial of Patent Cases.\*

### Abuses of the Present System.

BY LOUIS C. BAEGENER, NEW YORK.

In my opinion, the practice and procedure of trying a patent case is antiquated, time consuming, abnormally expensive and generally unsatisfactory; final judgments are practically unobtainable, and pecuniary judgments so rare that any well advised infringer need hardly fear them.

#### How Time is Consumed and Expenses Run Up.

Once upon a time—so long ago that the memory of mankind runneth not to the contrary—our United States Supreme Court formulated rules of practice and procedure. If these rules are followed the testimony in a patent suit might be ready for the court at the end of six months. Practically, however, it takes from a year to 18 months to reach this point. The testimony of witnesses is taken at the lawyers' offices, usually on the typewriter. If taken stenographically, the stenographer benefits more by that method than the lawyers, because the lawyers and experts as a rule charge per diems, and of course the longer it takes the more per diems. The worst feature of this method of taking testimony is that it is practically legally impossible to stop either the witness or counsel from padding the record with testimony that would never be admissible were the trial in open court and could be ruled upon forthwith.

The record is unconsciously padded in this way by nearly everybody, for, firstly, it is in the direction of everybody's interest to do so; and, secondly, it requires less brain work to put such testimony in the record rather than to concentrate thought upon what is strictly relevant and competent and thereby materially condense the record.

It is not unusual for an expert witness to favor the court with his views on the witness stand for weeks and months at a time. By the way, eminent counsel once defined an expert to be one who swears expertly. And the legal taxable costs for a deposition of this kind to the successful party are \$2.50. Of course, this may have been a fair compensation 100 years ago, but it does not compensate a day laborer to-day for a day's work. It is not at all unusual for a suit involving fairly important issues to cost each side at the rate of from \$10,000 to \$20,000 per year.

After all the testimony has been taken it must usually be printed, an oral argument then takes place and printed briefs are submitted. After the close of the arguments, if not before, the court goes to sleep, forgets the oral arguments, and usually after the lapse of considerable time renders an opinion, resulting in a decree dismissing the complaint or directing an injunction and an accounting.

There is usually a stay of the accounting pending an appeal by the unsuccessful party to the Circuit Court of Appeals for that circuit, and if the decree of the court below is confirmed, testimony for an accounting is taken before a master and again all the elements combine to protract examinations and increase expenses. Practically, except in extraordinarily important cases, it is best to drop the accounting. The defendant is usually an irresponsible corporation anyway, or has lost or burnt its books of account. The burden of proof is very heavily on the complainant, and the law very jealously protects the poor infringer against unjust attacks. If you are lucky you get a judgment which is not reversed on appeal. You must be still luckier if you collect it, and if the expenses of obtaining and collecting such a money judgment are less than its face value you are indeed a fortunate man.

I always believed with old Galileo, or the old darkey, that the sun do move, and if I succeeded in getting the injunction I usually had enough of my client's money by that time and was anxious to turn to the next job. I have, however, heard of others occasionally collecting a judgment of some magnitude.

#### Further Troubles to Be Encountered.

Now, having obtained your injunction in this United States, which is generally believed to extend from the Atlantic to the Pacific and from the gulf to Canada, you might be foolish enough to think that your patent is valid and will henceforth be cheerfully respected. If you think that you are woefully mistaken. For, mark you, there are nine Circuit Courts of Appeals of the United States of co-ordinate jurisdiction. For instance, the second circuit takes in New York, Connecticut and Vermont; but New Jersey and Pennsylvania are in the third, and what is law in the second circuit in any particular case is not necessarily the law in the third, as the latter tribunal will frequently, "always with a heavy heart, however," intimate when coming to a diametrically opposite conclusion from that reached by the second.

So that, if you get an injunction in New York City against the Excelsior Corporation, with a capital stock of \$500, the incorporators can go to Hoboken, N. J., and incorporate as the Hoboken Excelsior Company, and everything, every detail that I have told you about the conduct of a law suit, must be done over again at similar expense of time and money.

The usual result is that the last Circuit Court of Appeals differs from the first. It is seldom that it agrees with it, and, of course, only when it can't help itself; otherwise it would surrender its own judgment, which all married men know is supposed to be wrong.

#### The Complainant Worse Off Than Before.

Now you are worse off than you were before. Before you began your first successful suit you could at least threaten or bluff with the patent and occasionally find an honest man who might give you a cent or two more for the patented article, just so that he might feel he was not a tort feasor every time; but now you are ridiculed and laughed at.

When I began the practice of the law, over 30 years ago, appeals from the Circuit Court were as a matter of right to the United States Supreme Court. It did take two or three years before your case was reached, but when it was you got a square deal, whether the decision was for or against you. It was *finis poloniarum*—or the end—but now there is never an end in sight for the unfortunate patentee.

Some genius, who in my opinion ought to be crucified, invented the present system of appealing to the Circuit Court of Appeals, and inserted a provision that no appeals from these circuits lie to the United States Supreme Court.

You can petition the United States Supreme Court, but as this august tribunal is exceedingly busy with many matters of the greatest importance, most of these petitions are denied without opinion, and the result is that whenever a diversity of opinions exists between two Circuit Courts of Appeals as to the validity of a patent and a petition for certiorari is denied, you can keep on litigating and guessing which of the two courts is right, and the chance is one guess would be about as good as the other.

There have been attempts to create one Court of Appeals at Washington, to which all appeals in patent cases would lie; but as the creation of such a court means the dispensation of patronage, I dare say that another decade or so will expire before such an improvement can go into effect.

#### Difficult to Suggest a Remedy.

I have narrated facts to you; how to cure these ills I am not prepared to say. In the earlier years of my practice I did not appreciate the great crime committed against the interests of the people. Now I am too old to make an effort to change them; but, like Carnegie, to some slight extent, I admit, I have benefited by these protective laws.

You can readily see what such a condition of affairs leads to. As a young man I took for granted that all judges were honest and learned. I have never since had reason to change my mind as to the integrity of judges, but the capacity and ability of judges in patent causes are as varied as the colors of the rainbow.

That patent lawyer is indeed inexperienced and care-

\* A paper read before the American Chemical Society.



less if to some extent he does not carefully select his tribunal so far as that is possible. For among the judges there are some who are so opposed to monopolies and patents that a mere look at the red seal and blue strings of a patent incites them to such wrath that the patent is instantly doomed.

And don't think for a moment that that is a joke either, because nobody has ever yet been able to define what is invention or discovery and how much or how little work, how laborious or how brilliant, there must be to dignify it by the name invention; and, therefore, any learned judge can always judicially decree that the claims are void for lack of patentable novelty, and no tribunal can really settle that question in any particular case except a court of last resort like the United States Supreme Court.

Therefore, it does make some difference whether you go before one court or another, even admitting that both courts decree according to their conscience; but, after all if the court of last resort finally finds in your favor, it is a poor consolation to say the judge meant well. It would have served your interest much better if he habitually meant ill and at the same time decided correctly in every instance.

While I have pointed out to you the abuses from which you as inventors and patentees suffer in the attempt to enforce your rights, I shall before closing call your attention to a ridiculous abuse from which of late the poor public suffers.

#### The Contributory Infringer.

An infringer is called a tortfeasor, and that is a bad enough name, but a contributory infringer is the worst specimen of humanity imaginable. This theory of contributory infringement is, like alfalfa or Indian corn, the peculiar growth of our country, and I advise you patentees to cultivate this theory and profit thereby.

Under the law as made by the courts to-day you can sell your patented engines, your aluminum, your carbide and other patented products upon condition that the purchaser, as long as he uses your patented device or process, shall buy his flour, eggs, oatmeal or soap, his rat traps, furniture or whatever you please from you or your agents, and if any wicked provision or hardware dealer should be mean enough to sell any of these articles to your vendees with knowledge of these restrictions, he becomes a contributory infringer, and you can annoy him and sue him and make him account for your losses.

This country never does anything by halves. It gives the worst protection possible to the patentee seeking to enforce the rights plainly given him by statutory law. On the other hand, by trick and device not found in the statutory law or in the patent laws of any other country, it enables him to hamper trade in the most beautiful manner possible.

Of course, this theory of contributory infringement does much to make patent laws unpopular, and in the end the honest patentee will suffer.

#### How Patent Cases Are Tried Abroad.

You might ask me what remedies I have to suggest. I can only say that in England all patent suits are tried in open court, and more quickly disposed of in consequence. The successful party recovers, say, two-thirds of his real expenses paid to lawyers and experts, but I do not profess to be accurate on this point.

In Germany, I understand, absolutely every patent is valid after five years, and during the five years practically valid, unless a proceeding is brought during that period in the Patent Office to vacate the patent.

Of course, neither in Great Britain nor Germany are there nine courts of last resort and of co-ordinate jurisdiction. The necessity for establishing one tribunal of last resort, be it a special Court of Appeals, or be it again the United States Supreme Court, seems to me so self-evident that no man of ordinary intelligence can doubt it.

That the public would benefit by the taking of testimony before judges with some power to rule upon the

evidence goes without saying, even if this would necessitate the appointment of 50 or more additional judges.

And in my opinion this last reform is the most needed, and you should direct your energies toward accomplishing it. Probably in course of time remedies will be found to correct some of the other abuses to which I have called attention.

The theory of contributory infringement will probably be exploded or confined within reasonable limits by the United States Supreme Court.

#### The Taylor Improved Journal Box.

For passenger and freight car trucks W. P. Taylor & Co., Buffalo, N. Y., have recently perfected an improved railroad car journal box, or oil box, fitted with a patent dust and waterproof self-locking cover. The box opening has two faces, one projecting  $\frac{1}{4}$  in. beyond the other, and the inside of the cover is correspondingly recessed, so that when closed it fits and makes a tight joint, excluding dust and water. The top of the cover is enlarged in cylindrical form to inclose the hinge lug, which extends the width of the box, and the hinge pin, leaving no aperture at the hinge joint through which dust and water might work into the journal box. The



A New Journal Box with Dustproof Self-Locking Cover, Made by W. P. Taylor & Co., Buffalo, N. Y.

box cover is held closed by a self-locking device, consisting of two lateral spring-actuated latch bolts supported in brackets on the inside of the lid. The bolts catch under lugs on the box inside of the opening. This device used in combination with the Master Car Builders' standard flat spring closes the cover automatically and holds it perfectly tight. The hinge pin is secured by a nut and then riveted, which prevents the cover being stolen or lost by jarring loose.

In fitting the covers to the boxes hydraulic pressure is used, the cover being pressed to a tight bearing around the face of the box and along the back of the hinge. A considerable economy in lubricating oil and packing waste is effected by the use of these dustproof journal boxes as they give longer service without repacking, dust being kept out of the oil soaked waste. There is also a saving in labor on account of the less frequent repacking necessary.

The boxes are made of a special gray iron and also of semisteel, and the covers of malleable iron. The boxes are cast by a special process of molding, which secures a perfectly true face equal to a planed face. About 1000 of these improved dustproof boxes are already in use on the Vanderbilt lines, and they are being tested by other railroad companies.

The Riter-Conley Mfg. Company, steel construction, Pittsburgh, has just established in the West two new sales offices, one in St. Louis, Third National Bank Building, with H. B. Clarke as resident manager, and one in Seattle, Central Building, with W. H. Dickinson as resident manager.

## Tariff Testimony at Washington.

From additional statements filed with the Ways and Means Committee of the House of Representatives, the following have been selected as of most interest to our readers:

### From the Susquehanna Smelting Company, Lockport, N. Y.

We trust in view of the statement submitted to you by the Electro Metals Company, a Canadian corporation, which purports to contradict two statements of fact included in our brief upon the subject of ferrosilicon, and relative to Canadian competition, that you will give this short reply your consideration. The Electro Metals Company, through Walter Gaston, has taken exception to two statements in our brief:

1. That it buys Canadian charcoal at two-thirds the price at which we can buy it.

2. That it obtains power 25 per cent. cheaper than we can obtain it, although the power originally comes from the same power development.

With regard to the first statement we apologize to Mr. Gaston and the Electro Metals Company. We should have said "can buy Canadian charcoal at two-thirds the price at which we can obtain it." The price of charcoal, f.o.b. Toronto, is \$8 per 2000 lb., while the best price of charcoal at Lockport, to very large consumers, is \$11.25 per 2000 lb., the average price ranging from \$13 to \$16 per 2000 lb. The purest ferrosilicon is made by using charcoal as a reducing agent, and we had fallen into the error that the Electro Metals Company would be sure to use charcoal. The Electro Metals Company may use no charcoal at all or use imported charcoal; in either event we are content to leave it that the price of charcoal in Canada is substantially two-thirds the price of charcoal in Lockport, N. Y.

To pass to the second statement of fact to which the Electro Metals Company takes exception: "That the Canadian company obtains bounty-fed power 25 per cent. cheaper than we can obtain it at Lockport, N. Y." The statement that this power was 25 per cent. cheaper is substantially true as shown below. We will say at once, however, that we were misinformed that the cheaper Canadian power was the consequence of a bounty given to the company developing power. This statement was incorrect, and it is correct to state that the company developing the power pays royalty on all power developed to the Canadian Government. It is however, an undisputed fact that Niagara power developed on the Canadian side can be bought at Welland, Ont., for \$12.75; at points nearer the origin in Canada for \$12.50, and that at no point on the American side can power of identical character from the same development, or any other, to the best of our knowledge and belief, be bought for less than \$16, for smelting purposes. Lockport, owing to a variety of reasons, obtains benefit of the most favorable rates. These facts, it will be admitted, do constitute a natural advantage in favor of the Canadian industry concerned.

We can scarcely believe that the Electro Metals Company was ever offered power in a possible location for this enterprise in the United States at a price less than \$12.75 per horsepower per year, since we ourselves, before locating our plant at Lockport, searched over the American side of the Niagara frontier for the most favorable rates. In no case were we offered a rate better than \$16, and in most cases a considerably higher one. We feel satisfied that there is no point in the United States where ferrosilicon could be manufactured and marketed to better advantage than close to Niagara Falls on the Niagara frontier, taking freight rates and power cost both into consideration. On these facts we contend that our second statement was justified.

Mr. Gaston makes many and varied statements as to European competition, which from their general and indefinite nature do not call for reply. The salient fact remains that never at any time has an American manufacturer been able to compete either abroad or in Canada, while both the European and Canadian manufacturer are to-day selling ferrosilicon in the States at prices which appear to us, who have both knowledge and experience, to be unfair and ridiculous. We cannot believe that lately ferrosilicon that has been made in the States has been sold in Canada at a profit. If ferrosilicon has been sold into Canada from the States at anything like present prices it must have been first imported from abroad; a fact that would throw an interesting light on European costs.

We should be sorry for the committee to think that a brief was submitted by us in bad faith. Any unintentional misrepresentation we are prepared to take the blame for. We frankly admit that we approached the Ways and Means Committee in the interest only of the manufacturers of domestic electrolytic ferrosilicon. We submit, however, that our statement gave the committee a true idea of the actual position, a position which justifies our brief. Lastly, we would remind the committee that practically the only other corporation interested in the domestic industry—namely, the

Electro Metallurgical Company of Niagara Falls, fully confirmed our statements in its brief presented upon the subject.

### From the Alabama Consolidated Coal & Iron Company Birmingham, Ala.

The following arguments are respectfully submitted on behalf of the Alabama Consolidated Coal & Iron Company, producer of purely commercial iron and coal, and located in the Birmingham, Ala., District, against any alteration in the present tariff rate on coal and pig iron:

Birmingham is the chief producing center of the coal and iron industry of Alabama, and Alabama produces more pig iron than any other Southern State. Alabama can produce in normal times about 1,800,000 tons of pig iron and 14,500,000 tons of coal. Its own manufactories consume approximately 55 per cent. of its output of pig iron, leaving 45 per cent. to be marketed elsewhere. This amounts, therefore, to 810,000 tons.

Geographically, and from the standpoint of consumption, Birmingham is badly located, being 275 miles from tide-water. Note the following freight rates to the principal points of consumption:

Pittsburgh .....	\$4.90
Chicago .....	4.35
Cincinnati .....	3.25
St. Louis .....	3.75
Philadelphia (rail and water) .....	4.00
Philadelphia (all rail) .....	5.00
New York (rail and water) .....	4.25
New York (all rail) .....	5.95
Boston (rail and water) .....	4.60
Boston (all rail) .....	6.40

From the above figures you will note that the average freight rate on Birmingham pig iron is considerably in excess of the present tariff.

The cost of making pig iron in Birmingham in 1907, prior to the panic of October of that year, was \$12.61 per gross ton of 2240 lb., thus making the cost laid down in New York, during that period, \$12.61 plus \$4.25 equals \$16.86, excluding any profit.

The present selling price of Birmingham No. 2 is \$13, f.o.b. cars, or \$17.25 New York Harbor. The present selling price of Cleveland (English) pig iron is \$12.04. This iron can be delivered in New York Harbor for \$2 per ton freight. So that on the present basis Cleveland iron would cost, on dock New York, \$12.04 plus \$2 plus \$4, equals \$18.04, or a difference of only 79 cents.

It may be argued that the present average cost of making pig iron in the Birmingham District is less than \$12.61, and this is quite true, but the lessening in cost is simply the result of panic conditions, and a revival of prosperity would immediately send the cost back to the 1907 figures.

Even at the present selling price there is no undue profit, for with our lean ores, requiring from 1½ to 2 tons of coke per ton of iron, the yield to the stockholder is small. The truth of this statement is evidenced by the following figures:

Cost of building one complete stack of 200 tons daily capacity .....	\$750,000
Cost of building 300 coke ovens and opening coal mines .....	300,000
Cost of building coal washer .....	75,000
Cost of opening ore mines .....	125,000
Cost of opening limestone quarry .....	50,000
Total .....	\$1,300,000

This investment will have to be renewed once every 10 years, and as such a furnace will produce in this period about 750,000 tons of pig iron the product would have to make for renewal \$1,300,000, and for 6 per cent interest, \$780,000; total, \$2,080,000; or practically \$3 per ton. So that, even if the average cost of iron be \$10 now, only a living profit is being obtained at to-day's selling figures.

Furthermore, you will note that no allowance is made for investment in mineral lands and depreciation thereof, it being rather roughly assumed that the appreciation in the value of mineral lands will cover this.

It should be further stated that the pig iron market abroad would welcome the least reduction in the tariff, as the above figures show that a very moderate reduction would allow them to use our Atlantic seaboard towns as a dumping ground; and it is to these very Atlantic seaboard towns that we look for the consumption of a large amount of our surplus pig iron.

Turning now to coal: If you will look at a map of the United States, you will note that the Ohio and tributary streams provide a highway for the coal fields of Pennsylvania, Ohio, Kentucky and partially for those of West Virginia. As a general proposition, the coal of these States is of rather better grade and more cheaply mined than ours; therefore they can control the whole river trade all the way to New Orleans. On the Atlantic Coast the Pocahontas field, with its 10-ft. seam of the best coal in the world, can mine coal and put it on board ship at prices we can never hope to reach. This means that the Atlantic seaboard trade, from Maine to Tampico, Mexico, is controlled by the Virginia and West Virginia coals, and this leaves us only the restricted area immediately contiguous to our district.

The truth of the foregoing was demonstrated last autumn, when, owing to an excessive and prolonged drought, coal could not be boated down the Ohio. This brought about



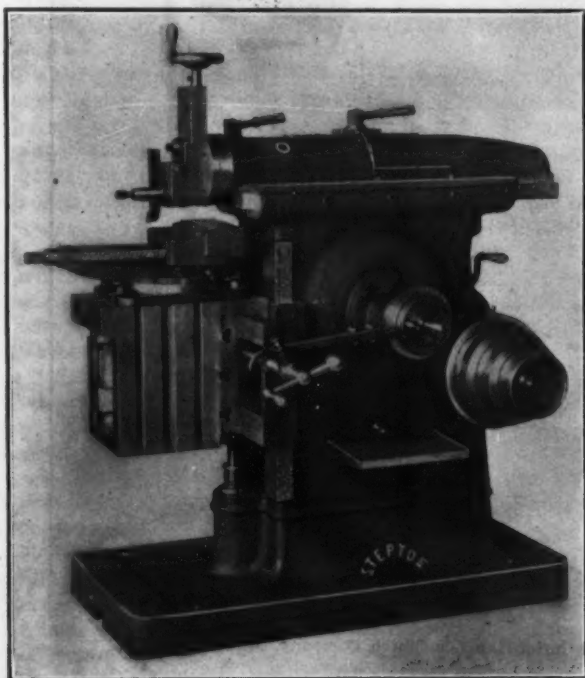
an immediate demand from Mississippi Valley points, and at one time this district shipped into New Orleans alone 3000 tons per day. As soon as the Ohio reached a boating stage, however, this demand failed.

Now, if the tariff be removed on coal, the Nova Scotia mines, situated as they are on tidewater, can supply the Atlantic Coast by direct barge and steamer at figures which will deprive our Virginia and West Virginia mines, with their railroad haul to tidewater, of all profit, and cause them to further seek interior trade, thus still further restricting our sales area.

From the above figures and facts, which are most conservatively stated, it is evident that Alabama is rather in need of an increase in the tariff than a decrease.

### The New Steptoe 16-In. Crank Shaper.

Novel features have been incorporated in a recently designed back geared crank shaper, manufactured by the John Steptoe Shaper Company, Cincinnati, Ohio. The head can be instantly loosened by pushing the lever at the back of the head, swiveled to any angle, and then be again instantly fastened by pulling the lever toward the



The New 16-In. Back Geared Crank Shaper Built by the John Steptoe Shaper Company, Cincinnati, Ohio.

operator. This improvement effects a saving of time over the old manner of fastening the head with bolts, being considerably quicker than manipulating bolts, and requires no wrench. A stud passed through the center of the harp and an eccentric stud from the top of the ram pull the head squarely against the front of the ram.

The length of stroke is altered by the lever projecting through the feed plate and can be accomplished while the machine is in motion. The device in the bull gear is self-locking and is held in position when the adjusting lever is taken off the shaft, thus avoiding the necessity of locking the shaft in position. The telescopic screw under the table is fully inclosed, preventing oil and chips from getting under the base, which usually happens where a hole is left in the base of the machine.

The operating side of the machine is stiffened by a basin shaped brace of large cross section. The base of the machine is heavy to eliminate vibration, a slight amount of which in the base would mean serious vibration at the tool. The shaft bearings have cast iron bushings, which are made a tight fit and are pressed in place. The bushings can be removed and replaced readily when necessary. The shaft bearings are oiled by rings carrying the oil from wells to the shaft as it revolves, furnishing constant lubrication, which keeps the shaft cool and prevents it from cutting. The rings are wide strips of brass, giving liberal contact on the shaft and dis-

tributing the oil more freely than a round ring with its limited contact on the shaft.

This company also manufactures a single geared crank shaper of similar design, with a gear ratio of about  $6\frac{1}{2}$  to 1. The back geared crank shaper illustrated has a single geared ratio of  $6\frac{1}{2}$  to 1, and a back geared ratio of about 20 to 1. The back gears involve a sleeve with two gears attached and splined to the shaft, revolving with it, thus avoiding the wear on the hole in the gears common when they run idle on the shaft. By means of a second sleeve these gears are shifted through a lever at the back of the column, which is placed in an upright position within easy reach of the operator. The speed is thereby increased or decreased, or the power increased or decreased, as may be desired. The driving gears are of phosphor bronze.

The ram is strongly ribbed and braced, and of heavy design. The feed plate is different from the design usually used. The feed eccentric is pivoted, so that it can be swiveled in any direction. The holes in the plate are drilled and reamed tapered. The stud in the eccentric has a spring in it and is also tapered. The tapered pin will therefore take up any wear which may occur at this hole. The holes are drilled in a circle to keep them as far apart as possible and are numbered to correspond with the teeth in the feed ratchet, making it easy to set for the desired feed. The ring which encircles the feed eccentric is split and fitted with a fiber washer; by filing it any wear which may occur in the ring may be easily taken up.

The vise base is graduated at an angle, so that the graduations can be easily seen by the operator. In fastening work in a vise the upper jaw has a tendency to lift as the work is tightened. To avoid this two bolts are placed through the upper jaw, and by means of two nuts the jaw can be firmly clamped to the lower jaw, which insures accuracy in the work.

**The Massillon Bridge & Structural Company.**—This company, recently incorporated with a capital stock of \$250,000, has purchased the bridge plant at Massillon, Ohio, and will manufacture bridges and steel structures of all classes. The official staff of the company is as follows: H. A. Croxton, president; C. S. Davis, vice-president and general manager; Miles C. Bland, chief engineer; E. Rice, secretary and treasurer; C. D. Yost, assistant secretary and treasurer; Robert M. Reay, superintendent of shops; Robert Sweed, superintendent of erection. Mr. Croxton is president of the Massillon Iron & Steel Company, and is identified with other manufacturing industries in the vicinity. Mr. Davis was for 12 years chief engineer of the Massillon Bridge Company and three years chief engineer of the Toledo-Massillon Bridge Company. Mr. Bland was contracting manager for the American Bridge Company at Cleveland four years, and contracting engineer for the Pittsburgh Steel Construction Company for one year. Mr. Rice was plant engineer for the Massillon Bridge Company 12 years, and plant engineer for the Toledo-Massillon Bridge Company three years. Mr. Reay has been superintendent of the plant at Massillon for 30 years. Mr. Sweed had charge of the erection work for the Massillon Bridge Company 26 years, and for the Toledo-Massillon Bridge Company three years.

The Bessemer & Lake Erie Railroad, one of the roads controlled and operated by the United States Steel Corporation, and which runs from Conneaut, on Lake Erie, to Bessemer, in the Pittsburgh District, is said to hold the world's record for low cost of operation and net earnings. It has 152 miles of main line, and its freight density has attained the record of 5,748,147 tons per mile of road. The average revenue train load last year was 937 tons. The average train load bound to the Pittsburgh District in the busiest period of last year was 1406 tons. Almost 10,000,000 tons per annum have been carried by this ore and fuel road. In the high record year for freight it moved something more than 6,000,000 tons of iron ore. In a normal year it has earned \$25,924 for each mile. The highest net earnings in one year came to almost \$3,000,000.



### The Cutler-Hammer Hand Magnet.

A hand lifting magnet weighing only 7 lb., but capable of lifting castings of from 10 to 15 times its own weight, is a new product of the Cutler-Hammer Clutch Company, Milwaukee, Wis. It operates on 110-volt direct current circuits, and is furnished with drop cord and attachment plug so that it may be attached to an ordinary lamp socket. The push button mounted on top of the magnet and operated by the thumb closes the circuit to the coils and makes the magnet operative. On releasing the button the poles become demagnetized and the load is released. The first of these little magnets was made for the company's own use and proved so useful that it was decided to manufacture for the market.

In machine shops the magnet may be used for removing chips and borings from machine tools or parts of work not easily accessible, as the bottoms of deep recesses. Dropped tools, bolts, boring bars, &c., are easily recovered with the magnet from places from which it

is small and of the self-starting, or polyphase, squirrel cage type and is installed at no great distance from the tank and float switch, so that the cost of wiring between the float switch and motor will not become excessive. With the self-starter only two small wires are required between the float switch and the self-starter. The main line current is carried in the wires which connect the self-starter to the motor, and if these are placed close together the heavy wiring will be reduced to a minimum.

The self-starter is standard in sizes from 1 to 15 hp., but can be used only with single, two or three phase motors which can be thrown directly across the line to start. By substituting a pressure regulator for the float switch, referred to above, it can also be employed for automatically starting and stopping motors operating on compression systems. It finds a further application in vacuum air cleaning systems. The motor, self-starter and vacuum pump are usually installed in the basement, and a snap switch or push button for starting and stopping the motor is placed on each floor or in each room, if desired,



Typical Uses of the Hand Lifting Magnet Made by the Cutler-Hammer Clutch Company, Milwaukee, Wis.

would be difficult to fish them by ordinary means. For separating brass and iron filings it is especially useful. In the same manner tacks or nails can be separated from brass screws with which they may have been accidentally mixed. In foundries the magnet may be used to pick up hot or awkwardly shaped castings, smooth plates which are sometimes difficult to pick up from a flat surface, or for removing small particles of metal from the molding sand.

### The New Cutler-Hammer Alternating-Current Self-Starters:

A new line of self-starters for use with alternating current motors has recently been placed on the market by the Cutler-Hammer Mfg. Company, Milwaukee, Wis. These include self-starters for use with single, two or three phase motors which may be thrown directly across the line to start, two types of self-starters for squirrel cage motors and two for slip ring motors. In addition to these is a line of two-pole and three-pole float switches.

The float switch is used in connection with a copper float, chain and weight for automatically starting and stopping motors operating pumps on open tank systems. By adjusting two buttons on a chain passing through an eye in the arm of the float switch this arm will be moved up or down whenever the water in the tank reaches a predetermined high or low level, thus opening or closing the circuit to the solenoid of the self-starter, which in turn operates to stop or start the motor. The same equipment may be used without a self-starter, provided the motor

these being connected to the solenoid of the self-starter by small wires.

The second type of self-starter mentioned reduces the starting current by inserting resistance in the primary circuit of the motor. Where it is desirable to still further reduce the starting current a potential type of self-starter should be used. Squirrel cage motors are not well adapted for starting under heavy loads, hence these self-starters should be used only where the starting duty is light. They are well adapted for starting line shafts, ventilating fans or centrifugal pumps, but are not suitable for use with reciprocating pumps or machinery starting under load.

The slip ring type of motor is much better suited for heavy starting duty than the squirrel cage motor, its starting characteristics being similar to that of a direct current shunt wound motor where the starting torque does not exceed 250 per cent. of the normal torque. The third type of self-starters are suitable for use with slip ring motors; one form is for motors starting under full load, and another is limited to motors starting under light load or no load.

Naylor & Co., New York, have secured from the Interstate Commerce Commission an order requiring the Lehigh Valley Railroad Company to make a freight rate on pyrites cinder from Buffalo, N. Y., to points in Pennsylvania and New Jersey, not to exceed the rate on iron ore for the same deliveries. The fact was brought out that the rate on iron ore is \$1.45 per ton to points of destination which have been carrying a \$2 rate on pyrites cinder.

## The Porter Process of Galvanizing Small Articles.

In *The Iron Age* of August 18, 1904, a description was given of a machine invented by George Porter for galvanizing small articles, such as nails, screws, washers, &c. This machine has been in successful use for some time by the Keystone Nail Company, formerly of Philadelphia, but now operating a plant in Rochester, Pa. In the intervening years Mr. Porter has been extending his activities still further in the same direction, and has invented apparatus for accomplishing a much greater amount of work in this line and displacing a very large part of the hand labor ordinarily used. This line of galvanizing machinery, which is designed to operate by the hot dipped process, automatically takes the articles to be galvanized from the acid tank and passes them through the various processes, weighing them and packing them in kegs without the use of any hand labor whatever. By this machinery the articles are evenly coated, the waste of zinc by the ordinary process of galvanizing is largely obviated, and the cost of galvanizing is considerably lessened by the reduction in the labor required. Following is a brief description of the machines in question:

No. 1 is an automatic drying apparatus for drying small articles preparatory to galvanizing. This apparatus receives the articles from the acid bath in which they have been immersed, heats them to any temperature required, and removes all foreign substances which should not go into the galvanizing kettle with the articles. This assists in reducing the losses of drosses and oxidation.

No. 2 is an automatic galvanizing or coating machine which is claimed to save the labor of five men over present methods. It effectively handles all such articles as nails, tacks, screws, rivets, fittings, spikes, bolts, nuts, washers, &c.

No. 3 is an automatic apparatus for removing hot surplus metal from metal coated articles and cooling them without the aid of water or liquids. This device is a great improvement on the first Porter machine. It successfully eliminates the use of water jackets which are a constant menace to successful operation, and are also subject to freezing in winter. It has a new design of elevator buckets for withdrawing the articles from the tank of molten metal, being so constructed as to handle even nails successfully, these having heretofore been found most difficult to manipulate with the form of buckets available.

No. 4 is an automatic electro-magnetic separator and packing device. This separates the nails or other articles from the granular particles of zinc or other coating metals after being operated upon by apparatus No. 3.

No. 5 is an automatic weighing scales which weighs the galvanized articles correctly from a continuous supply and records them automatically. This is claimed to weigh faster than any other scale in the market. It avoids dependence upon boys or men to put the correct weight of nails or other articles in the kegs.

No. 6 is a combination of automatic devices for galvanizing or metal coating cross-arm braces and similar articles. These braces, which are used on telephone, telegraph and electric light poles, have always been difficult and expensive articles to galvanize. This machine will galvanize 2700 lb. per hour, packed in bundles ready for shipment, with the labor of only three boys in the whole process.

The Porter Metal Mfg. Company, Perry Building, Sixteenth and Chestnut streets, Philadelphia, has been organized for the purpose of equipping and operating a factory with the above described apparatus and to turn out galvanized products. It also owns and controls a patent for oil heating and heat regulating devices for galvanizing tanks, which is a valuable addition to the apparatus named, as oil, natural gas or producer gas is greatly superior to coke for heating purposes in galvanizing.

The new lake freighter *Alva C. Dinkey*, built for the Pittsburgh Steamship Company at the Lorain, Ohio, yard of the American Ship Building Company, and launched

February 6, is 600 ft. long over all and can carry 12,000 tons of iron ore. The steamer *E. J. Buffington*, of like size, will be launched shortly.

## The Kelly Cylinder Reamer.

The construction and principle of the Kelly adjustable or floating reamer was described with illustrations in *The Iron Age* November 19, 1908. This, the size B, is made in capacities ranging from 1 to 5¼ in. in diameter of holes. Recently the manufacturer, the Kelly Tool Company, Cleveland, Ohio, has extended the line with the addition of the type C heavy body cylinder reamer, particularly designed for finishing engine cylinders and made in a range of sizes from 3 to 11½ in. in diameter. Except for the size and the form of the blades which are used for the roughing cut, these reamers are similar to those that have already been described in these columns. As with the smaller reamers the blade holder can be used rigid or floating. In the hogging or boring reamers the blade holder is secured, making a rigid boring tool usually set to cut about 0.02 in. below finished size of the cylinder bore. When the finishing reamer is used the blade holder floats sidewise in the slot of the boring bar enough to compensate for any nonalignment of the machine from a few thousandths of an inch to 1-64 in. In extreme cases, so that both blades in the finishing do an equal amount of work and insure a uniform diameter.

The blades are of high speed steel, having a working section of ¾ x 1 in., and are of convex radial form, fitting the smooth wall of the cylinder and acting as a pilot guide 1 in. long, bridging over any small defects or pores in the cylinder wall. The heels or rear part of the cutters are slightly rounded and dulled, causing the blades to act as a smooth nosed pilot in backing out, while under motion, giving a glasslike surface and entirely obviating, it is claimed, the necessity of grinding. It is argued that the avoiding of the use of emery which is certain to leave dust in the cylinders that has a deleterious effect on piston rings, is a decided advantage for this reamer.

The reamer body is one solid piece of hardened steel into which the hardened cutters are fitted tightly and are ground to fit the 10-degree dovetail slots in the body. The 10-degree hardened gibbed bushings, which apply their pressure on the outer edge of the blade, force it against the hardened inner wall of the dovetail slot of the body. Further security against yielding while under pressure in the work is acquired by placing a fine pitch hardened adjusting screw at the rear end of and directly in line with the hardened blades, thus forcing the reamer to cut its exact calibered size. The blades in each blade holder have a range of adjustment of ½ in. The company also makes a type D cylinder reamer somewhat lighter in weight. The bodies of the type C are ¾ x 2½ in., and the blades, ¾ x ¾ in., and the bodies of the type D are ½ x 2 in., and the blades, ¼ x ½ in. By using a relay of two Kelly type C finishing reamers in the boring bar slot the cylinder mill can be run continuously, and the reamers can be changed quickly with the certainty of maintaining a standard size.

The L. Sessenwein Rail & Iron Company has established offices at 182 William street, Montreal, Canada, to deal in old railroad material and supplies for steam and electric railroads. Negotiations are under way for a large tract of land to be used as a storage yard for new and second hand steel rails that the company intends to deal in on an extensive scale. L. Sessenwein, who severed connections in June, 1908, with Sessenwein Brothers, is managing director of the new company.

Though the exact dimensions have not been published it is expected that the *Titanic* and *Olympic*, the two new vessels for the White Star Line, for which keels have just been laid at the Harland & Wolff shipyards at Belfast, will be about 900 ft. long and 90 ft. beam. Though of greater length than the *Lusitania* and *Mauretania* the new vessels will not compete with them in speed, about 20 knots being proposed.



# ISOLATED POWER PLANTS.\*

## The Case for the Central Station.

BY RICHARD W. HALE, BOSTON, MASS.

In practice the question whether an isolated plant shall be installed is debated by the owner, the consulting engineer (in Boston often an architect acts in this capacity) and the representative of the central station. The owner will listen to and trust his engineer, sometimes too much, forgetting the natural bias his advice may have when a commission may be affected by it. Sometimes, too, the owner will not give a fair hearing to the representative of the central station, or is even prevented from doing so by his engineer who does not sufficiently realize that it is a breach of fiduciary duty where his own commission depends upon the result.

### Presenting the Case of the Central Station.

The representative of the central station in dealing with the owner starts at a disadvantage, and his success depends upon bringing the facts home to the owner and convincing him. The first division of these facts is the central station rate, and the nature and quality of the service it pays for. It is practically necessary, in the writer's opinion, for success in this controversy to quote a rate and guarantee that is a public service rate. Of course, some owners are attracted by the idea of a secret rebate, but on the other hand, more are repelled by the suspicion that their larger competitors are getting a bigger rebate. And before the average special contract for service will expire by lapse of time it will probably be a crime to rebate on the sale of power as it is now on transportation. The guaranteed public service rate is not only better general policy, but it fixes a basis of actual cost which is more attractive than even the most reliable estimates of what an isolated plant may do.

As a matter of tactics also, comparison by a solicitor of business comes from the wrong mouth and is odious. While comparison is the ultimate object an enormous gain in effectiveness comes from stating the facts so fairly that the owner makes his own comparisons. It is better to invite searching inquiry into all the elements of cost on both sides and into the moral value of elements which do not show on a cost sheet. The writer, for instance, does not assert that the conclusions of cost reached later in this article should be offered as conclusive against the isolated plant in a particular case. But it is fair to say that a decision by the average owner will be much more likely to be right if he weighs for himself each item of cost, and neglects no item of risk or efficiency; the wise advocate of central station service can do no better than to give assistance upon each specific point.

### Classification of Arguments.

The arguments on both sides are best classified in two sets, those which do and those which do not appear in a full advance estimate of costs. In the latter class belong the assurance that a large central station always will be ready and never will break down, and its flexibility of service. A building supplied by a central station can be used as a storage warehouse where the light or power is turned on once a week or a factory where machines run all day with the same amount of foresight and capital expenditure on the part of the owner of the building, while an isolated plant is flexible only within narrow limits. These will affect final costs to the man who pays at the end. Insurance and fire hazard also are hard to put in the cost sheet in advance. In Boston the underwriters are said to let a block plant go through a wall, while the public servant has to go into the street and out again even if the more direct and cheaper way is through the wall. Mr. Ripley in his recent article in *The Iron Age* reports reverse conditions in New York. But a hole in a partition with electric wires through it is not frowned on by underwriters without reason, and a service which avoids that is worth more to each one of 10,000

consumers even if the cost sheet of many of them will never show either a fire or an increased insurance premium.

It is sometimes argued that isolated plants are the right thing now because any intelligent mechanic can run them, and because central stations have led the way and served as schools. It is true, as suggested, that isolated plants and their superintendents have learned much from central stations and otherwise, and are better off in consequence. But is it not also true that the central stations know more now than they did when the lessons were learned? It cannot be true that the intelligence of the stationary engineer is an asset or argument for any particular way of making power. His self-interest, however, will often drive him, and his motives are as much to be reckoned with as his intelligence. In Boston this self-interest has made it necessary to watch with extreme care the meters which the central stations sometimes install in isolated plants to convince their owners by actual records that such power is expensive. The meters have been tampered with and more frequently unnecessary lights have been left burning or unnecessary power used to falsify the record and save the job.

### Costs.

If the central stations ever used to argue that an isolated electric plant is not to be allowed in fair comparison the benefit of the fact that it is an addendum to a mechanical plant they have stopped doing so now. They are the people in the world most familiar with increment costs—that is, with the extent to which working a plant on an additional load increases total or decreases unit costs. Hence they sympathize fully with this argument for isolated plants so long as the statistics based on it deal with facts and not fancies or futures.

The items of cost of electric service which can appear on a cost sheet of the manufacture of electricity and belong on every adequate one are believed to be as follows: Rent, interest, depreciation, repairs and renewals, taxes, insurance and fire protection, coal, water, lamps, sundries (oil waste, &c.), labor and profit.

**Rent.**—A building should be designed with reserve space so that if there is an error in the allowance for any given service, or loads increase, there will not be an emergency cost of making room later. Such space while in reserve can usually be rented for about its value to the owner. Experience in Boston does not show that such reservation is an appreciable cost. For space that is used a fair rent should be allowed in the cost sheet. The files of the Boston Edison Company tell of a case where a consulting engineer advising on the problem under discussion refused to allow anything for rent. The central station then offered to hire the space for a substation at the rate which it figured for gross rent. The owner refused that offer as low. The average rental value of space used for a plant ought to be charged against it.

**Interest.**—The rate of interest which prevails in mercantile and electrical enterprises free from risk should be charged against an isolated plant. Its equivalent appears in every central station cost. Neither real estate interest nor business profits are in point. This is exactly fair. It is about 6 per cent. To be fair, say, 5 per cent., but observe that risk is not included.

**Depreciation.**—There is a steam engine in Bristol, England, over 125 years old, which is still in service. The writer is director in a small water company which has a lot of 2-in. galvanized iron pipe which has lain on the surface of the ground in Maine since 1895 subjected half the year to 200 lb. pressure and the other half of the year empty and covered with snow. It is nearly as good as ever, and worth appreciably more than its cost. On the other hand, there are steam engines on record which were worthless when bought, and the very water com-

\* This article is a reply to the one by C. M. Ripley in *The Iron Age*, January 7, 1909, and in its preparation the writer had the assistance of his brother, R. S. Hale, superintendent of the Boston Edison Electric Company.



pany in question threw out in four years three systems for siphoning water over a rise. There are plenty of concerns which have been selling dynamos and switchboards for 15 years. The fair test would be to choose a year's sales of such a concern to isolated plants made, say, 14 years ago, and see what the percentage of depreciation, in fact, has been. Allowing for both growing obsolete and growing old where the last writer in *The Iron Age* allows only for the latter, such statistics would speak the exact truth. The writer is informed by men who were at that time working for the General Electric Company that they estimate that not 10 per cent. of such apparatus is in effective use to-day. To be sure, in the future age may be less important, but obsolescence is likely to be more important than ever. The isolated plant built to-day will need 15 years hence to compare its costs with up to date central station costs not with those of to-day. So it will not be enough for it to last, unless it grows better as fast as central stations do.

Taking depreciation in its exact sense \$5 per annum for 14 years at 5 per cent. will produce \$102.90, and will thus enable the owner to charge first cost off completely in, say, 13½ years. If proper charges are made to renewal account this seems about fair. But such figuring can be correct only if no part of the sinking fund is applied to any renewal in the whole 13½ years. It should be available at the end in cash. The difference between two sets of statisticians probably depends upon whether depreciation is made to cover a multitude of sins, in which case 5 per cent. is not enough, or whether renewals have their own allowance.

**Repairs and Renewals.**—The proper charge to this account is a sum sufficient to cover all wear and tear and breakage, and renew all wearing or decaying parts so that a sinking fund or depreciation allowance cannot only be set aside, but also be found in a bank account after it has been found in a ledger. On an installation cost of \$42,500 Mr. Ripley allows \$1000 for repairs, or about 2½ per cent. The present writer knows of no evidence to prove that on an isolated dynamo, switchboard and electrical installation, repairs and renewals (not including depreciation or replacement) can be had as low as this. In the first five years that will be so, in the first ten it may be, but in a plant assured to last 14 or 15 years, experience looks the other way. When the day of judgment on this question is brought about by real statistics of past success of isolated plants, those which have kept their accounts straight should show 10 per cent. for repairs, renewals and depreciation, not including interest—that is, 5 per cent. for repairs and renewals sufficient to keep the plant in economical operation, and 5 more to make a fund which cannot be drawn on for 14 years, and which can then be drawn upon for money.

**Taxes.**—Taxes are a truth of modern times. Taxes on tangible property like dynamos and switchboards may sometimes be dodged by individuals. Among 1000, however, average taxes are a real expense. One per cent. of first cost is a fair allowance.

**Insurance.**—In every walk in life insurance or fire protection or fire loss costs money. The writer has asked one of the leading fire and insurance experts in Boston what the average charge for insurance and fire protection is, stated in per cent. on first cost, and he states that within conflagration limits, which would roughly correspond to the territory served by a central station, 0.75 per cent. of first cost is a fair figure. This result would be more than fair to an isolated plant. First-class fire protection and insurance against breakdowns caused by fire is included in central station costs. This does not include increase or decrease of risk on the remainder of the building, which was discussed earlier in this article.

**Coal** is an item not likely to cause much discussion. Central stations buy cheaper, both for quantity and tested quality, than small buyers. A good sized isolated plant can emulate their economy.

**Water.**—General statistics make water cost about 10 per cent. of coal. Mr. Ripley's figures seem almost to fit this.

**Lamps.**—These are generally included in sundries. Actual experience with a lamp would show that the load

of an isolated plant is more exacting. But even in lamps there is an element not expressed in money. Tungsten lamps, for instance, were available in Boston on central station supply over a year before private owners could buy and get delivery. Central stations often buy exclusive local patent rights on new inventions. Just now the Tungsten lamp is saving from overload isolated plants which would otherwise have had to be replaced. The next invention may work the converse.

**Sundries.**—Mr. Ripley allow 3 per cent. on first cost in his article, and the present writer accepts it.

**Labor.**—The labor cost of an isolated plant is likely to be an increment cost. The office of the building or factory has spare time to put on bookkeeping, and the firemen may be able to stoke a larger boiler and the engineer have a chance to care for electrical machinery, all without a rise in payroll. Where a manufacturer or owner is sure that his force is not going to increase or decrease and is always going to be in excess of the demands of his business, this may be a substantial argument for the isolated plant. But if the staff or the demands on its service are variable the isolated plant is as likely to cause labor waste as to save it.

**Profit.**—The laborer is worthy of his hire. So is the boss. Both statements are truisms, the latter a much neglected one. It is not fair to reckon all charges for using and risking capital at 5 per cent. on first cost, and then credit interest on sinking fund at the rate which the owner makes his profits. The scientific thing to do is the converse. Where making a sinking fund without risk, charge interest and call it interest. If you invest the sinking fund in mining stock, give the gold mine and not the dynamo credit for the excess above interest. But in all outlays upon business things charge a profit which in the long run will go to meet risks if risks turn out to exist, and to pay wages to the boss if he dodges the risks. The annual turn over of an electric power manufacturer ought to show a gross profit which should be something substantial on the investment at risk. A \$43,500 plant with annual expenses of \$18,000 needs a working capital which would make it a \$50,000 concern. If, as Mr. Ripley states, and the writer believes, the average merchant with a capital of \$50,000 earns 10 to 20 per cent. per annum—say 15 per cent.—5 per cent. of this is true interest and the rest, or 10 per cent., is profit, wages of superintendence, return for risk—whatever you call it. This 10 per cent. profit, out of which to pay the owner for his superintendence and risk, is not an unfair charge to an isolated plant unless manufacturing electricity is different from every other form of business. When we consider the risk that a factory may move, and its isolated plant be only junk to its successor, 10 per cent. seems very low.

#### Summary.

We now have, calculable in terms of per cent. on first cost:

	Per cent.
Interest .....	5
Depreciation .....	5
Repairs and renewals.....	5
Sundries .....	3
Taxes .....	1
Insurance .....	¾
Profit and superintendence.....	10

Or say..... 30

And depending upon other considerations—labor, rent, coal, water, lamps and sundries. The writer does not offer these as certainties. Any one or all may be done for less or more. They are averages which an investor should carefully adjust to his own case without listening to either consulting engineer or solicitor, unless he is logical and convincing.

#### Central Station Rates.

Central station rates to large consumers with a guaranteed demand are rightly lower than to purchasers who are less profitable and more exacting. The owner who considers the matter should be sure of the rate which applies to his own case. In Boston this is easy, since every rate is as public as a railroad tariff. The Boston Edison Company has wisely anticipated the time when differences, kept secret or not founded on reason,

will be as bad in a public service corporation which sells energy as they now are in one which sells transportation. Both, as the theorist would say, are only modes of motion or of public service.

#### Conclusion.

The writer believes that two very important truths about the subject of this article are commonly neglected. The first is that an isolated plant is a small business in itself, subject in the long run to all the costs and risks of a business, so that no owner should be told or believe that he is going to escape several of the ills which such an enterprise makes him heir to. The second is that the central station supplies superintendence and, therefore, eliminates risks; competes with contractors' costs, and saves engineers' commissions. This last is very important, because no man should be judge in his own cause. Yet the average owner is apt to make the consulting engineer judge of whether he should have a commission. The true judge is the owner. Where the isolated plant can win it can win in his court. Where it can only win by the consulting engineer's advocacy, or where the central station competitor does not reach the owner's ear, the engineer will do himself an injustice in the long run.

### Fosdick Boring and Clutch Cutting Fixtures.

BY H. A. ANGEBRANDT.\*

Two interesting fixtures used in the shop of the Fosdick Machine Tool Company are shown in the accompanying illustration. Fig. 1 represents a long hole which had to be accurately bored. A steady rest could not be

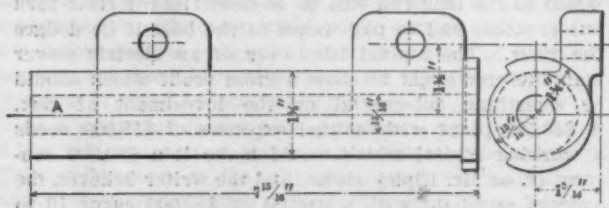


Fig. 1.—Piece to Be Bored.

used on the job without an extra setting, so the piece was chucked up at the end A, and then faced and bored with very unsatisfactory results caused by the long overhang of the piece. Later the fixture shown in Fig. 2 was made. The end A of the fixture was then chucked up true in a small turret lathe, and the clamp B, Fig. 2, was used to hold the work in place, which could be easily removed for inserting the next piece. With the use of this device very satisfactory results were obtained, and considerable

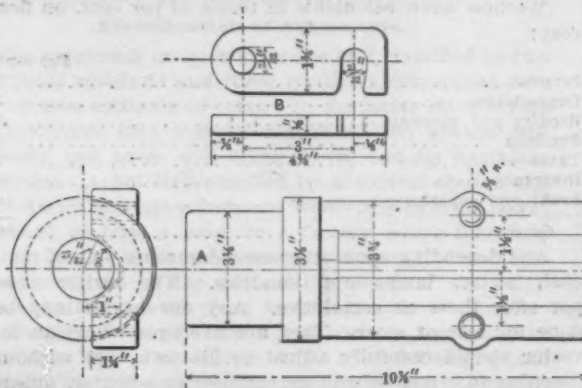


Fig. 2.—Fixture for Holding the Piece While Being Bored.

time was saved over the old method as each piece did not have to be trued up independently and heavier feeds and speeds could be used.

Fig. 3 shows a fixture for cutting clutches which eliminates the unsatisfactory expanding arbors. The machines manufactured by the Fosdick Company require

quite a number of clutches, and also require them to be of great accuracy. The old practice was to use an expanding arbor held in the dividing head of the milling machine. The clutch ring was slipped over this arbor and the arbor expanded until the ring was firmly held. This manner of holding the work was far from giving satisfaction, as the ring had to be trued by turning the dividing head until the ring ran true, and after being trued could not be held rigid enough for an ordinary feed. To overcome this the fixture shown in Fig. 3 was made. This chuck was screwed on the dividing head. The sketch plainly shows the method of tightening the clutch rings into position by holding them externally, and also the method used for holding different lengths and diameter

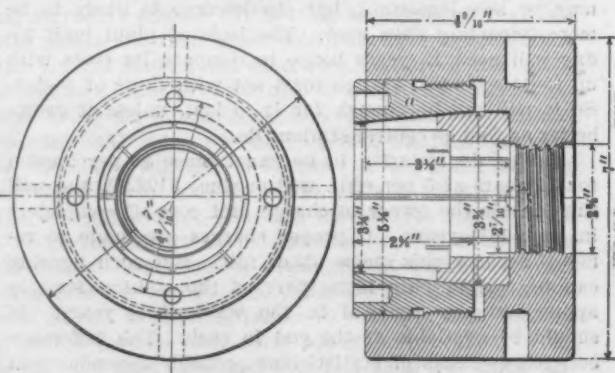


Fig. 3.—Fixture for Holding Various Size Positive Clutches While Cutting the Teeth.

clutches by using a set of interchangeable bushings. A spanner wrench is provided for tightening and loosening the clutches. Instead of holding the clutch rings internally they are held externally, and thereby very rigidly and absolutely true.

To use the fixture, there is inserted in it an expanding bush of the proper depth and diameter of bore, and then with the work in position the taper nut *a* is screwed down until the clutch is held firm. To remove the clutch a quarter turn of the chuck collar with a spanner wrench is sufficient. The same expanding bush could be used with a clutch of the same diameter, but of shorter length by putting a spacing collar behind it in the chuck. With six taper bushes and six collars 15 different clutches could be cut, all varying in lengths and diameters.

**The New Corrigan-McKinney Furnace.**—The first contracts in connection with the new blast furnace to be built on the upper river in Cleveland by Corrigan, McKinney & Co. were let last week. The Brown Hoisting Machinery Company, Cleveland, was given the contract for an ore bridge, equipped with a 10-ton bucket. The Wellman-Seaver-Morgan Company, Cleveland, was given the contract for two Hulett unloaders, each with a 10-ton bucket. The contract for 1100 ft. of dockage was given to the Hunkin Bros. Construction Company, Cleveland. A timber dock will be built, with the intention of eventually making it concrete. The ore handling plant will have a capacity of about 1,000,000 tons a year, and storage room will be provided for 1,250,000 tons. Work on the dock and handling plant will be started at once. Bids for the blast furnace will be received in about three weeks. The stack will have a daily capacity of about 400 tons, and it is the intention to have it ready for operation January 1, 1910. Plans have been prepared for two blast furnaces, but the first one will be completed and placed in blast before work on the second will be started.

Aviation appears to be regarded in Germany as a fact accomplished. A company is said to have been formed at Duesseldorf for aerial traffic, support being promised by prominent manufacturers of the Rhenish Provinces. The purpose is the establishment of a regular service of airships between Duesseldorf and Berlin. A German aero stations company has been founded by financiers in Berlin, Frankfurt and Cassel, and has worked out plans for airship stations in 29 German towns, and believes that the service between them is now certain.

\* Fosdick Machine Tool Company, Cincinnati, Ohio.



### Chandler's Adding and Subtracting Scale.

Engineers, machinists, draftsmen and, in fact, any one having occasion to add or subtract fractions of an inch or their decimal equivalents will be interested in the rotary calculator for the purpose which has just been copyrighted by E. F. Chandler, Brooklyn, N. Y. As the illustration shows it consists of two superimposed disks, one of smaller radius than the other by the width of the ring of figures at the circumference of the larger disk, and pivoted together at their centers, so that they may be rotated with respect to one another. Each disk is grad-



Facsimile of the Scale About Four-fifths Actual Size.

uated in 64 equal divisions; those of the larger or lower disk are marked in sequence of sixty-fourths from zero to sixty-three-sixty-fourths in clockwise rotation, and those of the smaller or upper disk in the same way, but in counter clockwise rotation. The division corresponding to zero on the upper disk is cut out, forming a slot which exposes the decimal equivalent under the fraction on the lower disk. The decimal equivalents of the fractions on the upper disk are visible at all times.

To use the scale for adding, the two fractions to be added, one on either scale, are placed to register, and the answer appears in the slot opening and may be read at once, either as a fraction or a decimal. To add decimal fractions the common fraction corresponding to one must first be found on the upper disk, which indicates which division of the lower disk is to be matched with the other decimal fraction. Subtraction is performed in reverse manner, setting the slot at the larger number and reading the difference as registered with the other number on either of the disks. The answer is of course found in two different places, but with the numbers interchanged in their respective positions on the two disks. If it is desired to have the answer of a subtraction in its decimal equivalent both fractions to be subtracted

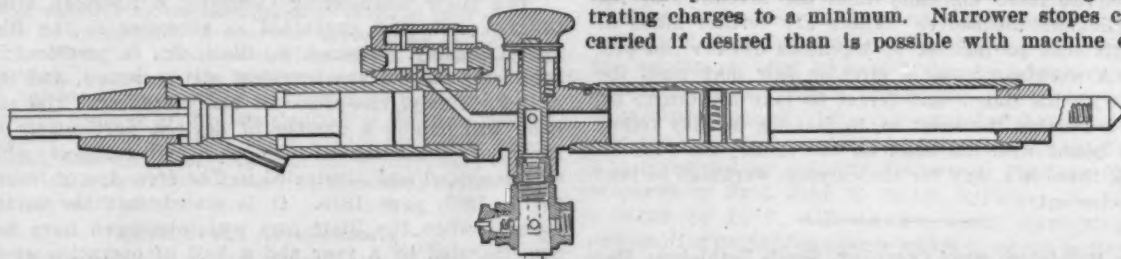


Fig. 2.—Longitudinal Section of the No. 40 Stope Drill, Made by the Cleveland Pneumatic Tool Company, Cleveland, Ohio.

should be found on the lower disk, so that the answer will be read on the upper disk.

The disks are of pure white matt-finish celluloid, printed with black waterproof ink, so that they may be washed when soiled. The overall dimension—that is, the diameter of the larger disk, is  $3\frac{1}{4}$  in. The scales are sold by J. S. Barron, Barron Building, New York, at the price of \$1, which includes a leather carrying case. The device is as useful as it is simple, and, being made in circular form rather than slide rule style, is more

compact, and has the further advantage of being continuous, answers larger than one being indicated each time that the zero passed in the manipulations of adding a series of numbers.

### The Cleveland Stope Drill.

As sales agents for the mining department of the Cleveland Pneumatic Tool Company, the Cleveland Rock Drill Company, 6404 Hawthorne avenue, Cleveland, Ohio, is handling the Cleveland No. 40 Stope drill. Although the field of operation of this machine is limited to stoping and overhead work, the fact that it is designed especially for one class of work argues that it will do more and better work than a machine having no special field. In the claims for excellence emphasis is particularly laid on the simple design, the small expenditure of labor or money required to keep the machine in condition, and the large amount of work done in proportion to the power required. An exterior view of the machine is shown in Fig. 1, and a sectional view in Fig. 2, which shows the construction.

In the construction special attention is called to the side rods holding the chuck, hammer cylinder and back head together; to the simple reversible quick-acting spool valve which runs in the valve chest placed on the outside of the machine, where it can be taken out and put back in a minute; to the patent swivel and roller, serving the double purpose of keeping the hose hanging freely and affording an easy place to oil the machine; to the selection of materials, all parts being either drop forged or made of steel, and most of all to the fact that the machine can be easily taken completely apart in the stope and reassembled in a few minutes.

It is stated that that which appeals to the average mine superintendent aside from the simplicity and low cost of maintenance is the money saved by its operation in place of reciprocating drills which have been in common use for the past 30 or 40 years. This machine can be operated by one man, therefore saving about \$3 per shift, or from \$900 to \$2700 per year in helper's wages alone, depending on whether the machine is operated one or three shifts per 24 hr. It is claimed also that one No. 40 Cleveland stope drill will do as much work on one-third of the air consumption as one  $2\frac{1}{4}$ -in. reciprocating machine, and that there are less than one-third as many parts in the Cleveland machine as in a reciprocating drill. The machine can be handled by one man wherever he can go himself. The veins can be stoped out with the least possible amount of wall rock, reducing concentrating charges to a minimum. Narrower stopes can be carried if desired than is possible with machine drills.



Fig. 1.

The machine is extremely light, and as it does not require being set up like a piston drill, holes can often be put in to better advantage and with a big saving of time.

The J. G. Brill Company, Philadelphia, reports last year's gross earnings at \$3,845,173, against \$9,211,825 in the previous year. Net earnings were only \$188,830, against \$1,669,640. Allowing \$98,089 for depreciation and repairs, the remainder of the net earnings was carried to surplus, making that item \$1,790,694.



## Safety Devices for Machinery.\*

BY JOHN E. SWEET, SYRACUSE, N. Y.

Safety devices and the enactment of laws compelling employers to install them do not seem to accomplish all that is hoped for. The persistence of the workmen themselves in devising ways to render the devices abortive is about enough to dishearten every hope we may have of remedying this horrible waste of life and limb and the resulting misery.

Within the last few months three cases have come to my attention where disobeying instructions led to the loss of two or three fingers. A boy was set to work on a punch press and given a rod of iron to remove the pieces, and such instruction in working the press that he ran it successfully. Then he discarded the poker, did not remove his foot from the pedal, put in his hand and punched off his fingers. The jury's award was some hundreds of dollars, and this jury's award is another discouraging feature. If the proprietor is forced by law to apply all available safety devices, and the workman uses or fails to use them, and gets killed or injured, goes to law, and the jury gives him an award, "What's the use?" the proprietor will say.

The two other accidents that have come to my attention were in spite of the admirably devised shield over the revolving knives of wood planing machines. One of these was locked back by a simple clamp, and always kept locked back; the other was hung up on the wall.

We all know, or think we know, that if the proprietor of a factory has provided all available devices for safety and the man neglects to use them and gets killed or injured, the proprietor should be absolved from all blame; but will the courts and juries look at it in that light? How easy it will be for the victim to prove that the proprietor knew he was not using the device, and that it was not himself that put it out of use; then what? I know this is a negative argument, but should it not be taken into consideration? I can hardly be looked upon as disinterested, or as taking the manufacturer's view, though I now hold the position of employer. I have myself devised safety appliances and put in use those made by others.

I have paid large sums to employees for injuries for which they were entirely at fault. We have had two men killed and one seriously injured by being wound around shafts, in spite of the fact that the rule known to all was that no belt was to be put on without stopping the shaft; and what I am discouraged about is not from fancy or theory, but from the facts of experience.

Perhaps the only remedy for the negligence or carelessness of the workmen would be a law fixing punishment for interfering with safety devices, rendering them inoperative, except in cases of necessity; for every safety device for one cause or another has to be removed or put out of use occasionally. This leaves a loophole; so the law, if one is proposed, must be carefully drawn, and may require more ingenuity than the invention of the safety devices themselves. There are certain kinds of accidents that no number of ingenious devices can prevent. A workman using a circular saw may push the board with his thumb and forget to take his thumb off before it reaches the saw; or, in planing, he may follow up the board with his hand on the table. So with all devices, there is a way for the careless workman to beat the device out.

The Bethlehem Steel Company, South Bethlehem, Pa., in arranging for its export trade, has applied for and been granted benefit of drawback on duties paid on the imported materials consumed less the legal deduction of 1 per cent. on pig iron manufactured from imported iron ore and on steel ingots, blooms, billets, bars, rails, plates, structural material, castings, forgings, guns, gun mountings, projectiles, or machinery manufactured from pig iron produced from imported iron ore and imported ferromanganese and ferrosilicon.

\* Read at the New York meeting of the American Anti-Accident Association, February 11, 1909.

## New Publications.

**Laboratory Experiments in Metallurgy.**—By Albert Sauveur and H. M. Boylston. Flat cloth bound 8vo; 73 pages. Published by the authors at Cambridge, Mass. Price, \$1.25.

The authors have compiled this volume from notes of experiments conducted in the departments of mining and metallurgy at Harvard University. The first part consists of 30 pages, describing the experiments in general metallurgy, while the balance of the book is devoted to those in the metallurgy of iron and steel. These notes were prepared primarily for the students of Harvard University and have been put in permanent form so as to be available for other teachers and students in metallurgy, as well as practitioners. For a subsequent edition a wider range of experiments is promised. The 13 experiments in general metallurgy begin with the coking and approximate analysis of coal, followed by four experiments which deal with pyrometry, then three which find the melting point of tin, lead and zinc, respectively, and, lastly, five in the reduction of oxides. In the experiments in the metallurgy of iron and steel the influence of carbon upon the density, elasticity, ductility and hardness of iron is demonstrated. The bulk of the remainder deal principally with heat treatment and the relation between critical points and hardening power of steel, together with experiments in tempering and annealing. The authors have shown the way into most interesting and valuable investigations of the properties of steel, particularly as affected by heat treatment, and giving data which afford students the basis for inquiries in larger fields.

**Accurate Tool Work.** By C. L. Goodrich, department foreman, Pratt & Whitney Company, and F. A. Stanley, associate editor *American Machinist*. Size 6 x 9 in., 250 pages, 211 illustrations. Price, \$2. Publisher, Hill Publishing Company, New York.

The precise work that pertains in watch manufacture and the like has only in comparatively recent times been approached in machine shops turning out larger products. Necessity for interchangeability has been the principal influence in bringing about this change in practice, and knowledge of the use of tools and instruments of highly refined accuracy has generally been obtainable only from actual experience in the shops or articles appearing in periodicals. The need of a book on the subject has prompted the authors to compile this work, which draws largely from published articles of their own and other contributors to the *American Machinist*. It deals especially with the making and use of jigs and fixtures and the use of gauges, test indicators and, for particularly close work, the microscope. While the book does not pretend to be exhaustive of its subject, it aims to make accessible to the toolmaker the information most important to him.

The Blair Engineering Company, 6 Sherman street, Chicago, has been organized as successor to the Blair Port Company. Thomas S. Blair, Jr., is president; J. Stewart Andrews, vice-president and secretary, and Roswell F. Mundy, vice-president and treasurer. The company will handle a number of devices, particularly the Blair port and bulkhead for open hearth furnaces, which was described and illustrated in *The Iron Age* of November 7, 1907, page 1310. It is stated that the savings claimed when the Blair port was introduced have been demonstrated by a year and a half of operation at the open hearth plant of the Lackawanna Steel Company, Buffalo, and seven months' operation at the South Works of the Illinois Steel Company, and the open hearth plant of the Grand Crossing Tack Company, Grand Crossing, Ill. The record noted for one furnace is 600 heats, with no repairs beyond occasional patching of the side walls, the original roof being in good condition.

The spring meeting of the American Society of Mechanical Engineers will be held in Washington, D. C., early in May.

### Important Trademark Legislation.

WASHINGTON, D. C., February 16, 1909.—The House of Representatives has passed the bill, S. 3969, introduced by Senator Smoot of Utah and passed by the Senate in the last session, making several important amendments in the laws relating to the registration of trademarks. The bill will receive the President's approval in due course and, therefore, will take effect not later than the 23d inst.

#### The Sections Amended.

The Smoot bill proposes to amend section 2 of the so-called Bonyne act and section 1 of the Currier act to read as follows:

Sec. 2. That the application prescribed in the foregoing section, in order to create any right whatever in favor of the party filing it, must be accompanied by a written declaration verified by the applicant, or by a member of the firm or an officer of the corporation or association applying, to the effect that the applicant believes himself or the firm, corporation or association in whose behalf he makes the application to be the owner of the trademark sought to be registered, and that no other person, firm, corporation or association, to the best of the applicant's knowledge and belief, has the right to use such trademark in the United States, either in the identical form or in such near resemblance thereto as might be calculated to deceive; that such trademark is used in commerce among the several States, or with foreign nations, or with Indian tribes, and that the description and drawing presented truly represent the trademark sought to be registered. If the applicant resides or is located in a foreign country, the statement required shall, in addition to the foregoing, set forth that the trademark has been registered by the applicant, or that an application for the registration thereof has been filed by him in the foreign country in which he resides or is located, and shall give the date of such registration, or the application therefor, as the case may be, except that in the application in such cases it shall not be necessary to state that the mark has been used in commerce with the United States or among the States thereof. The verification required by this section may be made before any person within the United States authorized by law to administer oaths, or, when the applicant resides in a foreign country, before any minister, chargé d'affaires, consul, or commercial agent holding commission under the Government of the United States, or before any notary public, judge, or magistrate having an official seal and authorized to administer oaths in the foreign country in which the applicant may be, whose authority shall be proved by a certificate of a diplomatic or consular officer of the United States.

Sec. 1. That the owner of a trademark used in commerce with foreign nations, or among the several States, or with Indian tribes, provided such owner shall be domiciled within the territory of the United States, or resides in or is located in any foreign country which, by treaty, convention, or law, affords similar privileges to the citizens of the United States, may obtain registration for such trademark by complying with the following requirements: First, by filing in the Patent Office an application therefor, in writing, addressed to the Commissioner of Patents, signed by the applicant, specifying his name, domicile, location and citizenship; the class of merchandise and the particular description of goods comprised in such class to which the trademark is appropriated; a statement of the mode in which the same is applied and affixed to goods, and the length of time during which the trademark has been used; a description of the trademark itself shall be included, if desired by the applicant or required by the commissioner, provided such description is of a character to meet the approval of the commissioner. With this statement shall be filed a drawing of the trademark, signed by the applicant, or his attorney, and such number of specimens of the trademark as actually used as may be required by the Commissioner of Patents. Second, by paying into the Treasury of the United States the sum of \$10, and otherwise complying with the requirements of this act and such regulations as may be prescribed by the Commissioner of Patents.

#### Effect of the Amendments.

The changes made in the existing trademark laws by the above bill were suggested by the Commissioner of Patents and are based upon the experience gained since the Bonyne and Currier acts went into force. The most important change in the Bonyne act brings its terms into conformity with the settled practice at common law with regard to the use of trademarks in this country as distinguished from their use abroad in determining registration rights. The present law requires the applicant to certify that he is the only person entitled to use the trademark, notwithstanding the fact that the right to

use it in the United States is the only condition of its registration, even though other parties may have registered the same mark abroad. Inasmuch as use in this country is controlling in determining who was the first to adopt and use a trademark, it appears to be sufficient merely for the applicant to allege that "no other person, firm, corporation or association has the right to use the trademark in the United States." Until the Smoot law is approved, however, applicants must follow the old form, and in this connection it can be stated that the allegations of applicants as to exclusive ownership will be construed by the Patent Office to relate to American rights only.

The bill just passed also amends section 1 of the Currier act by permitting a description of the trademark to be incorporated in applications, this being now forbidden unless color forms a material feature of the mark. Experience has shown that in many cases the drawing does not convey an adequate understanding of the mark itself. If the mark is a portrait of a particular individual, there can be no description of such mark in the statement under the existing law. It is desirable that some brief description of such a mark be permitted. In case the mark is woven into the goods in a particular manner a description would be most helpful in determining the characteristics of the mark. Likewise, in foreign marks, especially those in the Oriental languages, a description is essential to an adequate understanding of the mark. Then, again, applicants often desire a description, inasmuch as their drawings are always restricted to the showing of the mark as it appears on the goods themselves or the packages containing the goods. They are of the opinion that the description of the mark will give them a broader protection than a mere showing of the mark. This may be particularly true in cases where the mark sought to be registered is a word-mark. In such cases there is a possibility of the mark being restricted to the particular form shown, whereas the applicant seeks protection for the word in any form in which it may be used, and if he be permitted to describe the mark as consisting of this word broadly this restriction could not possibly occur. It is believed that if a description of the mark is permitted in certain cases the public will be given greater information as to the mark registered, and possibly applicants may acquire broader protection.

W. L. C.

### Data on the Prevention of Shop Accidents.

The convention of the American Anti-Accident Association, held at the Twenty-third Street Y. M. C. A. Building, New York, February 11, while not largely attended, gave an opportunity for a presentation of the objects of the association with a view to enlisting cooperation in the East. President Thos. D. West made addresses at the afternoon and evening sessions on the work accomplished thus far and the lines on which the association expects to make progress in the future. A feature of the evening meeting was an address by Dr. Wm. H. Tolman, director of the American Museum of Safety, New York, who showed by lantern slides what is being done for the safeguarding of shop employees in the operation of modern machinery. Dr. Richard Moldenke, secretary of the American Foundrymen's Association, told of the results of the recent inquiry by a committee of that association into the causes of accidents in foundries. A brief paper was presented on "Safety Devices in Machine Shops," prepared by Prof. John E. Sweet, Syracuse, N. Y., also a paper by L. P. Alford, New York, classifying and commenting on 5577 accidents which occurred in 1906 and 1907 at the plant of "a large machine building firm in Massachusetts." Of this total 174 were called serious and 5208 minor, while 46 involved clerical employees and 149 outside employees. Of the minor accidents 3799 were to fingers, wrists, hands and forearms, and 1074 were the lodging of foreign bodies in the eyes.

The stockholders of the Youngstown Sheet & Tube Company have voted to increase the capital stock of the company from \$6,000,000 to \$10,000,000, as recommended by the directors some time ago.



## Kalux, a Steel Hardening Solution.

For the hardening of carbon or tool steels the Metal Hardening Solution Company, Granite Building, Rochester, N. Y., is introducing a liquid chemical preparation known as "Kalux." It is emphasized that it is only for carbon or tool steel. Air hardening steels naturally have no use for it, and machine steel or iron cannot be hardened by it.

The action of hardening is produced by the shock caused when heated steel is immersed in a liquid of a much lower temperature than itself. This shock can only be obtained where carbon is present to a greater or less extent, as is always the case in tool steel, and cannot be looked for in other classes of steel or iron, where, although carbon is present, it is in graphitic or some other form, which does not respond to or expand to the same extent that the carbon in tool steel will. The action of any hardening bath, such as water or brine, on machine steel can have no effect whatever unless potassium cyanide or some other such chemical is used, and then the effect is only on the surface, or penetrates but slightly, producing what is known as case hardening.

Carbon steels when heated to about 1450 degrees, the recognized heat for the majority of medium grade carbon steels, and plunged into one of the ordinary baths, such as water or brine, will almost invariably be short or brittle, unless tempered or drawn to color. This leads to one of the principal advantages of Kalux, where 1 ounce of this solution is added to each gallon of water in the hardening bath, the steel to be hardened can generally be heated to a lower temperature, say 1300 to 1350 degrees F., and where the tools have a cutting edge with heavy backing, such as surface machine points, cross bit



Fig. 1.—Fractured Specimens of the Same Steel Bar.—The left pair shows the fine grained break of a Kalux tempered piece, the right pair the coarser grained break when tempered in plain water.—Magnified about one and one-half times; actual size, 7-16 in. square.

drills, &c., they can be left without drawing the temper more than enough to take the strain off, and it will be found that while they are hard they will still be tough and the length of service much prolonged. The danger of overheating and injuring the steel is minimized by permitting the tools to be hardened at this lower temperature; nevertheless, they are left hard, but tough, due to the action of the chemicals of which Kalux is composed, which have the effect of driving the molecules of carbon contained in the steel into a more homogeneous form than is possible with the higher heat generally found necessary to bring the steel out glass hard.

There are certain tools made from thin sheets of metal, such as saws, razor blades, &c., for the hardening of which Kalux is not recommended, as the experiments with it so far have not determined satisfactory ways in which it can be used. These tools, being thin, have a tendency to warp, whereas tools of larger masses of metal do not have this tendency in the hardening. It may be that later means will be found for applying the solution for this special class of tempering, but the investigations have not been carried to a sufficient extent as yet to promise success with it.

As a result of sending samples of the solution to different companies for testing, the Metal Hardening Solution Company has a great many testimonials of a very assuring character indicating that there is real worth in the solution. The company does not claim an increase in efficiency, such as would be warranted from the reports which have been had from substance. They promise at least a 10 per cent. gain in efficiency, whereas there have been gains reported of 150 per cent.

In a special test of a sample of this solution made for *The Iron Age* by courtesy of James W. Nelson, manager Richard Dudgeon, New York, results were obtained which appear to bear out the claims made for Kalux. Four small pieces of steel were cut from the same bar, two of them being hardened at the same time and one cooled in a bath prepared with Kalux, while the other was cooled in the ordinary way in water. These pieces were broken and it was found that the grain is finer and closer in the piece hardened by Kalux than the other piece, as shown in Fig. 1 herewith. With practically the same result two other pieces were hardened and broken, these pieces being cut also from the same bar. Fig. 2

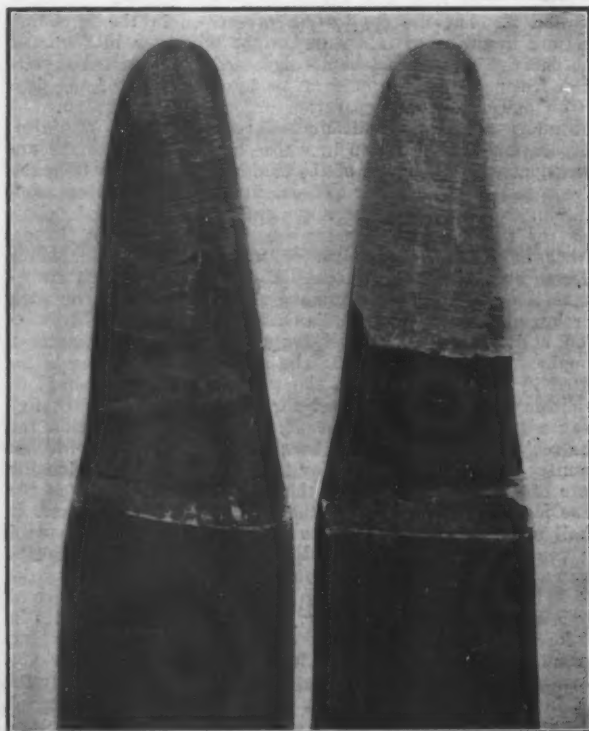


Fig. 2.—Top Views of the Cutting Ends of Two Lathe Tools Made from the Same Stock, the Left One Tempered with Kalux, the Other with Plain Water, Showing Their Condition After Use, Particularly Severe in the Case of the Kalux Tool.—The difference in color is not significant, being the result simply of grinding the temper color from the plain tempered tool. Magnified nearly twice; actual size of shank,  $\frac{3}{4}$  in. square.

shows also two lathe tools, both made from the same bar of Jessop's best cast steel and forged under the same conditions. One was hardened in the usual manner and the other by plunging in the Kalux solution. Afterward these tools were tested in a lathe with the result that the tool hardened with Kalux was found to give much more service than the other. A cut averaging about 3-16 sq. in. cross section was taken with this tool with a higher speed and for a greater length of time than with the other tool, and while the Kalux tempered tool still does not require resharpening, the other tool should be before it is fit to be used again. The test, while rather elementary, indicates that there is a decided advantage in the use of the solution, and the pieces of the square steel not only show a finer grain, but the steel is also much tougher. It required from four to five times as great a blow to break the pieces hardened in Kalux as those not so hardened.

The percentage of solution required for the bath depends somewhat on the grade of steel to be tempered. The higher grades of carbon steel require less solution— $\frac{1}{2}$  ounce per gallon of water is sufficient—while the very lowest grades may require as much as 2 ounces of solution per gallon of water. The correct amount to be used can only be determined by experiment in any particular case. It is always allowable, however, to quench the tools at a lower temperature than that which is customary. It is emphasized that Kalux is a liquid, not a powder; that it contains no cyanide of potassium, nor yellow prussiate, and that the process of using it is not a compli-



cated one. In tools of heavy stock, such as dies, lathes and corrugating tools, &c., the temper need be drawn only enough to relieve the strain. Longer life and better service from carbon steel tools are the benefit derived by the use of the solution. The cost of the bath all prepared with Kalux ready for use is about 6 cents per gallon where the medium grade steels are in general use.

One testimonial received by the company states that among other tools treated was a circular forming tool for an automatic screw machine, which previous to being treated by Kalux had required grinding at least three times a day, but after treatment it would go for three days without grinding. The material operated upon was 3-16-in. silver steel and the cutting speed was 80 ft. per minute. The tool was made of Jessop's steel. Another user found that drills that before would not go through certain stock could do so after being tempered in Kalux. The same shop tested a blanking die which was used to stamp out small pieces of tempered spring steel. It was found to be still in good condition after 10,000 operations, whereas 3000 was the best performance when the die was hardened by the ordinary methods. The steel was the same in both cases. Another user operating surface machine points under an air pressure of about 125 to 140 lb. found that one tool hardened with Kalux would outlast two, three and sometimes four tools hardened by the ordinary method. In a shipyard, after introducing the solution the tool dresser had less than half as much work to do, although in the yard the same amount of work was proceeding.

### The Baird Automatic Calculating Time Stamp.

The Chronograph, as it is called, made by the Baird Mfg. Company, 1592 North Halsted street, Chicago, is a calculating time stamp for automatically computing the elapsed time of jobs in foundries, factories, machine shops, &c., wagon deliveries, telephone toll calls, billiard and bowling games, &c. An exterior view of the machine is shown in Fig. 1. The size of the case is 6 in. high, 5 $\frac{1}{8}$  in. wide and 6 $\frac{1}{2}$  in. deep, and the levers rise 4 in. above the case.

Fig. 2 shows a typical record from one of these time stamps. When a ticket is first placed between the guides on the machine and the start lever is depressed there is printed the date, time of day and the arrow outside of the elapsed dial. This dial, however, is not printed until the ticket is replaced in the guides and the finish lever is used. The arrow will then be found pointing to the exact elapsed time. The arrow directly above the date line like the hand of a clock points at the time at which the start lever made its imprint.

There are several options in the style of elapsed time dial that may be furnished, and the date line is provided or omitted as desired. In the form of dial shown in Fig. 2 the elapsed time dial covers a period of 12 hr. divided in quarter hour divisions. Such a form is particularly suited to job tickets or wagon deliveries. Fig. 3 shows a 20-min. dial circle, having quarter minute divisions. If preferred a 30-min. dial may be provided. This style is particularly intended for recording the time of telephone conversations, and since but a single elapsed dial is used confusion is avoided. Fig. 4 is a money value dial, in which the time is computed at 40 cents per hour. Such a dial is useful in factories, printing offices, &c., where the workmen's time would all be charged at the same rate per hour, since it reads directly the compensation to which each is entitled. It is also the form used in billiard halls and bowling alleys, &c.

The stamp may be set into a 6 x 6 $\frac{1}{2}$  in. hole in a switchboard, table or desk, so that the body of the machine is out of sight, with an opening left if it is desired to expose the clock dial on the front of the case. The imprint is made through a rapid lever action, which instead of a direct pressure, gives hammer speed that relieves the clock movement from shock. It is claimed that the mechanism is extremely simple, so that the maintenance cost of the stamp is inconsiderable, and that it is constructed to withstand severe usage without damage. At each motion of the start lever the printing ribbon is

moved exposing a fresh section for the action of the next impression. In general the Chronographs are fitted with 48-hr. movements unless eight-day movements are specified. The 48-hr. movement is recommended as the better time piece and the most reliable, and should be wound daily to give the best results. As extra attachments there may be furnished if desired changeable numbers to indicate an operator's number or department number, or a numbering attachment to stamp the tickets in sequence.



Fig. 1.



Fig. 2.

The Baird Chronograph and a Typical Record.



Fig. 3.

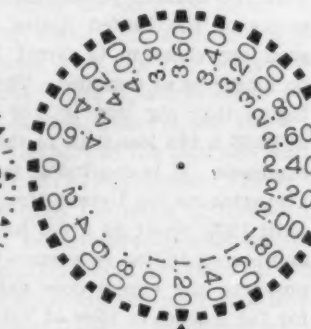


Fig. 4.

Other Styles of Elapsed Time Dials.

Any number of tickets can be printed in succession, each showing the time elapsed between the first and second imprints, regardless of the jobs overlapping one another.

The Chase Foundry & Mfg. Company, Columbus, Ohio, held its annual meeting February 6 and elected the following: P. A. Myers of F. E. Myers & Bro., Ashland, Ohio, president; Guy C. Myers, vice-president; S. M. Chase, general manager and secretary; W. C. Stocklin, superintendent. The company manufactures trucks and cars for almost every purpose. Advantage was taken of the dull times during the past year for increasing facilities and installing the most modern methods of construction. Special attention has been given to the brick, stone and concrete car equipment. The outlook is most favorable for a large business the coming year.

The Census Bureau statistics of electric lighting, electric traction and telephone companies shows a gross income for the three industries in the United States of \$790,000,000 in 1907. The *Electrical World* notes that the central station industry gives a livelihood to 47,500 people, telephony to 144,000 and traction to 220,000, making a total of 411,500 persons. The cost of the central station plants existing in 1907 was just \$1,000,000,000; the capitalization of telephony was \$1,100,000,000 and the capitalization of street railroads was just upon \$4,000,000,000, making a grand aggregate of \$6,100,000,000, or for 1908 about \$7,000,000,000.

# THE IRON AGE

Established in 1855.

New York, Thursday, February 18, 1909.

Entered at the New York Post Office, as Second Class Mail Matter.

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## Steel Making Costs and the Export Trade.

British steel masters have been reading carefully the testimony on iron and steel trade conditions given at Washington before the Ways and Means Committee. Some comments in the engineering press of Great Britain indicate that the result is an easier state of mind yonder on the dangers of the American invasion. We are told that the boasted possibilities of low costs at the steel works of the United States which were received with such apprehension in Great Britain 10 years ago need no longer be so regarded. The statement made at Washington that pig iron is now produced in Great Britain at \$3.65 a ton less than in the United States is given all emphasis. It is concluded, moreover, that with pig iron averaging in the United States in the eight years ending with 1907 about \$4 a ton higher than in Great Britain, and corresponding differences in the more highly finished products, the excess does not all represent extra profit for the makers in view of "the number of American iron and steel concerns that have been in financial difficulties."

One critic makes the Washington showing of domestic iron and steel manufacturers the occasion for congratulation that a new lease of life has come to the British steel industry. The changes are rung again on the fact that Lake Superior ore is 1000 miles from the coking coal of Pennsylvania, though mention is omitted of the fact that ore is carried 800 miles on the Great Lakes for less than a 50-mile haul would cost in Great Britain. The heavy capital charges against steel manufactured in the United States and the "insurmountable geographical handicaps" are fatal, we learn from the London *Engineer*, to any claim that iron and steel can be produced in the United States as cheaply as in Great Britain. The argument comes to a climax in the question:

Would half the plant represented by this capital [about two billion dollars in the American steel industry] have been allowed to stand idle since October, 1907, while Britain and Germany have been constantly receiving moderately good orders for steel from foreign countries, if, as is alleged, it [the United States] could produce steel more cheaply than it can be produced in Britain and Germany?

Whatever else may have been established concerning export trade in steel products, one certainty about it is that it cannot be turned on and off to suit the changing fortunes of the mills engaging in it. Months and years are required for building it up. It is not to be given up in good times because of the pressure of domestic demand; by the same sign it will not come at the beck of an idle mill when home orders fall off. Many considerations besides price enter into the placing of such busi-

ness. Political and racial relations are a large factor; the establishing of a trade footing, and the manufacture of product suited to the demands of particular territory. The fact that American mills did not attempt to dump steel products in other countries last year is explainable on a dozen grounds that take precedence of any consideration of comparative cost of production. The Steel Corporation continued to ship abroad and its exports of last year, considering the world-wide extent of the depression, compare favorably with those of Germany and Great Britain, taking the exports of the three countries in 1907 as a basis. If any light on the question of cost is furnished by the export statistics, it might be incumbent on our British critics to explain why the imports of German and American steel billets and sheet bars into Great Britain increased from 327,000 tons in 1907 to 560,000 tons in 1908.

The steel works of the United States were built to supply the demand from the greatest and best market for steel in the world—that of the territory between the Atlantic and Pacific and the Great Lakes and the Gulf. The consumption of steel in that market under ordinary conditions is more than in all of Germany and Great Britain and in all the markets of the world, so far as they are supplied from the steel works of Germany and Britain. Our works are not under the spur that constantly keeps British makers in the thick of international competition for orders. Most of the time they have their capacity fully occupied by the home demand. For ten years the intervals of slackness have been so short that they have used such times to better advantage in preparing to meet the calls of prosperity than in spasmodic efforts to invade foreign markets. Meantime the Steel Corporation has organized for export business in the only way in which success can be won, and regularly ships a small fraction of its product abroad. If prolonged depression at home should make it expedient to increase the exportation of steel from this country, the Steel Corporation is in position to meet the emergency, and on certain products, particularly rails, billets, sheet bars, plates and merchant bars, other domestic producers might take a hand, as some of the predecessors of the Steel Corporation did in the lull of 1900. But it would be found that "heavy capital charges," "geographical handicaps," and any other conditions which in the minds of British steel masters have been operating to reduce or eliminate the "American peril," were all unavailing to stay the invader. All calculations of assembling costs would prove highly academic in the face of an international contest for tonnage. But all indications are that the leading steel countries are no more desirous of putting their fighting costs on steel to a crucial test than they are to demonstrate in war which has the most effective naval armament.

The manager of the patent department of the Licensed Association of Automobile Builders has made the estimate, said to be based upon careful investigation and reliable data, that the industry was responsible for the circulation of close to \$500,000,000 in 1908. This amount includes a total of \$122,000,000 paid for automobiles sold during the year. It is well known that the accessories of the trade aggregate a prodigious figure, and, of course, great sums were paid for repairs, maintenance and as expenses incidental to the operation of machines. The estimate is probably not excessive; at any rate the automobile industry has been a tower of strength during the depression.



### Insurance Against Strikes.

The great power of the labor unions of France has forced the industries of that country to a system of mutual insurance against loss by strikes. This is a development not yet attained in this country except in a small way in connection with a few organizations, the membership of which is close and whose methods are private. In France strike insurance is an established institution, though it is of comparatively recent growth. Its basis is the general or overhead expense of the works of the insured, on the theory that many strikes have been pushed by the unions to successful termination because the manufacturer could not stand the drain of the general expense which must continue practically undiminished though a plant be idle. If he is protected against this loss, if the insurance company stands ready to reimburse him, his position can be one of far greater independence of action, and when a strike is based upon principles antagonistic to a trade as a whole the success of the one employer as against the unjust demands of his workmen may have results far beyond the local field of a single works or of a group of works. Therefore, the policy holders may receive practical results from the money paid in premiums, even though they themselves may never be direct beneficiaries. And, further, the known fact of this insurance must be a deterring influence against too aggressive action on the part of their men. The system also serves to protect the working people against unjust actions on the part of employers, for where a strike results through the fault of the insured owner he is not entitled to recompense for losses, the power to decide this question being vested in a committee which is selected with a view to the disinterestedness of its members.

The system consists of two kinds of companies, known as primary and secondary. An excellent illustration is afforded by the Metallurgical Works Mutual Insurance Fund. Each group included in the metal industry has a primary company of its own, with which the manufacturer deals direct. Each of the companies is a member of the Caisse Centrale Metallurgique, the secondary company, which acts as a mutual insurance fund between its subsidiary companies. It guarantees them against insufficiency in their resources should these be absorbed entirely by strikes in the course of a year. The policy holders are limited to an assessment of 3 per cent. of the amount of their insurance; up to the present time  $1\frac{1}{2}$  per cent. has been the maximum assessment. But if the expense of the year due to strikes should exceed the funds available, then the secondary company would furnish the balance required to meet the obligation to the insured. That the system is rapidly gaining in popularity in France is shown by the fact that the volume of insurance has increased from \$600,000 in 1907 to \$4,200,000 at the present time. A synopsis of the details of the system, as set forth at length in the *Engineer*, London, is as follows:

Each primary insurance company is formed of works owners whose outputs are of a similar nature, this insuring a community of interest between all the members. Each member has also to form part of a commercial syndicate approved by the insurance company which he wishes to join, the syndicate on its side having to be connected with the Union des Industries Metallurgiques et Minières, formed in France with a view to bringing together the works owners whose line of activity lies in metallurgy and mining. Each primary company is constituted for a period of 30 years; this period can be extended, and each member enters into an engagement to form part of the insurance company during the whole life of the latter; but each member—and the insurance company has the same facility—can sever his con-

nection at the expiration of every period of five years by giving six months' notice. The contract between each member and the company ceases at any time should the former close his works finally. If a works is sold, or the proprietary is modified, the insurance company may close the contract with the owner of that particular works, seeing that the insurance is a private agreement.

The object of the insurance company is to guarantee all members against a part of the pecuniary losses resulting from the partial or total cessation of work in their establishments, following a dispute between the management and the personnel, also against the proceedings instituted against them by the personnel on the occasion of such a dispute. The indemnity the insured member receives constitutes practically a compensation for the general charges which he continues to bear, notwithstanding a partial or a total stoppage of his works.

The member is required to make declaration of the difficulty in his plant, within six days after cessation of work, direct to the Central Committee, which is formed outside of every insurance company, with a view to complete impartiality. The committee is an entirely independent body, and its decision is final. Its certificate of loss brings the payment of the indemnity. Its opinions and decisions are valid only when given by four members at least. All decisions which would have for their effect to exclude the insured from receipt of indemnity—for example, when it is considered that a strike has occurred through the member's fault—have to be arrived at by a majority of two-thirds of the members present. The owner does not lose his liberty of action because he is insured, but if he should pursue measures of which the committee disapproves he loses his right to indemnity. In practice no such difficulty results. The committee co-operates during labor disputes with judicious advice and suggestion, while at the same time it endeavors to protect the general interests of the industry, and bears in mind legitimate claims on the part of the men and legitimate resistance on the part of the employers. The overhead expense, which constitutes the basis of insurance, includes the usual items of rent, insurance, salaries, &c., together with all annual contracts and annuities on patents, on condition that all such expense continues to be borne by the member notwithstanding the stoppage of work due to the strike. The policy must be for not less than one-half of the general expense.

### The New High Speed Steel.

So many jeremiads have issued from that side of the water in late years that the recent announcements from Sheffield, England, concerning a revolutionary high speed steel are more than ordinarily significant. There was not so much need at any time of more assertiveness on the part of the Sheffield producers, but the claims made for the new tool steel may mean a new birth of confidence in the British steel trade at large. Professor Arnold of Sheffield University is now expressing surprise at the amount of commotion created by his statement that another year would see on the market British tool steel quadrupling the cutting power of any previously known to metallurgy. Promptly following this came the definite announcement by a Sheffield firm of a new steel meeting the terms of the prediction—the one, indeed, which Professor Arnold had in mind. Unconcealed dismay was a first effect of this statement on the Sheffield trade, makers expressing the fear that it might unsettle their trade all over the world and result in the general holding up of contracts. Such a view can only be a temporary phase of the matter, and will give place to the same widespread interest in actual tests that was taken in the Taylor-White process when its results were so generally published some years ago.

That the new steel will be more expensive than tool steels now in use is one announcement supplementing that of Professor Arnold, and it is admitted that some of the conclusions at first drawn as to the alterations in machine tools which the new steel would necessitate were unwarranted. The manager of the works at which it is already being manufactured explains that there has been no thought of claiming that "Novo Superior" steel will work four times faster than present steels, but rather that it will work much longer on hard material with the cutting edge at a red heat, and that no matter what its heat it will not crack when plunged into water.

Naturally other manufacturers of Sheffield steels are being heard from as to the results of experiments they have been carrying on for many months in the same direction. And whatever impressions to the contrary may exist on the other side, American manufacturers of high speed steels have not been idle. At the same time the announcement of "steel with from three to seven times the cutting power of existing high speed steel," coming in connection with the recent decision on a high speed steel patent, is properly regarded as a development of first class importance. That it will result, as did the bringing out of the Taylor-White process, in extraordinary activity by all makers and in the eventual production of other steels of equal power, there is no reason to doubt.

### The Southern Steel Company's Reorganization.

The time limit for receiving assents and deposits under the proposed plan for the reorganization of the Southern Steel Company expired Monday, February 15. Provision satisfactory to the Reorganization Committee having been made to provide not less than \$2,000,000 of the cash requirements of the reorganization, the committee has declared the plan operative and effective. Of the amount called for, a liberal share is said to have been subscribed by prominent banking interests of London and Paris. The various properties owned by the company will be sold by the trustees in bankruptcy at Birmingham, Ala., some time in March, and the work of improvement and extensions already planned will then be carried out.

According to the terms of the reorganization, a new company will be created, probably under the laws of the State of New Jersey, and perhaps named the Southern Iron & Steel Company. It is intended to vest in it all the properties now owned not only by the Southern Steel Company, but also those of the Georgia Steel Company, the Lacey-Bueck Iron Company and the Chattanooga Iron & Coal Company.

The new securities to be authorized will consist of \$10,000,000 first and refunding mortgage 20-year gold bonds, \$7,000,000 noncumulative 6 per cent. preferred stock and \$10,000,000 common stock. Of the bonds, \$8,000,000 only will be issued at first, of which \$2,000,000 will be used to replace underlying first mortgage bonds. The interest to be paid on these bonds will be 4 per cent. for the first five years and 5 per cent. thereafter. The remaining \$2,000,000 of bonds will be issued later, the proceeds to be used for making improvements to the properties.

The regular monthly meeting of the Associated Foundry Foremen of Philadelphia was held in that city February 9. The subject for discussion was molding machines, which was opened by E. H. Mumford of the E. H. Mumford Company, Philadelphia, who made a general address on molding by machinery and the treatment of molding sand by the rubbing roller mill, made by Ph. Bonvillian and E. Ronceray. Stereopticon views of the Mumford 10-in. high trunion power squeezer were shown, demonstrating the ability of the machine to operate in deep sand without difficulty.

### The Steel Corporation Adopts the Heroult Electric Steel Refining Process.

The United States Steel Corporation has decided to introduce the Heroult electric furnace and steel process, after its engineers had made a close study of the general subject, extending over two years, and have made a number of visits to the localities abroad where electric furnaces and methods are in operation. At the same time its patent attorneys and experts made a thorough examination of the patents and of the state of the art.

The outcome of these investigations is that it has been decided to put up one 15-ton Heroult furnace at the South Chicago Works of the Illinois Steel Company and one 15-ton furnace at the Washburn & Moen plant at Worcester, of the American Steel & Wire Company. Probably a furnace at Homestead will follow. At the South Chicago plant, where three-phase current is available, both locally and from Gary, the purpose is to take the blown metal from the Bessemer converter and refine it in the Heroult furnace for the manufacture of a specially high grade of steel rail, the capacity of the electric furnace being about 500 tons per day of 24 hr. As to the ability of the Heroult process to eliminate phosphorus and sulphur and to deoxidize the bath, overwhelming evidence has been accumulated abroad.

At Worcester the Heroult furnace will be served by two 50-ton open hearth furnaces, and will be devoted particularly to the refining of the metal for use for the high grade steels which the plant requires for the many lines of special wire products.

The United States Steel Corporation will, therefore, be the pioneer in introducing electric refining both in the manufacture of tonnage products like rails and special steels for the wire industry. The quality of rails has been a burning subject in recent years, and the plan of producing what will be equivalent to tool steel quality is one which raises high hopes for the future. In fact, the question suggests itself whether the verdict in favor of open hearth steel which has been so freely given of late may not be reversed and whether the Bessemer converter backed by the Heroult electric refining furnace may not yet come to its own within the enlarged field which the ability to utilize impurer ores will offer. It is even within the range of probability that for this service the 15-ton electric furnace does not represent the maximum unit, and that furnaces of larger capacity may be found practicable.

Hardly less interest attaches to the refining of open hearth steel as at Worcester. Starting with a purer product from the steel furnace—whether it be acid with selected raw materials or basic open hearth steel from materials of moderate purity—the electric refining process will yield a final metal very low in impurities, and thoroughly deoxidized, which will greatly raise the standard of quality.

Plans for the two plants are now being drawn, and construction will be pushed vigorously so that both installations will be in operation before the early summer.

Oglebay, Norton & Co., Cleveland, Ohio, in the booklet giving analyses of their Lake Superior iron ores for 1909, list three new ores—the Yale and Glyuna from the Yale mine on the Gogebic range and the Belmont ore from the Eureka mine on the same range. The Hadley ore from the Yale mine and the Eureka from the Eureka mine, though with slightly differing analysis. The Moose Mountain magnetite shows the same analysis as in previous years except as to sulphur.



### The Alaska-Yukon-Pacific Exposition.

The Alaska-Yukon-Pacific Exposition, to be held in the city of Seattle, June 1 to October 16, 1909, is designed to exploit the resources of the Pacific Coast States, Alaska and the Yukon Territory and all countries bordering on the Pacific Ocean. The trade of the Pacific countries with the United States has been increased by leaps and bounds during the past two years, and from a commercial standpoint the 1909 exposition is of vast importance to the United States. John Barrett, director of the Bureau of American Republics, recently said: "The trade of the Pacific countries, aside from China and Japan, is destined to be the most important of any section of the world during the next 10 years. An unusual commercial development is taking place in these countries and this trade will be of even more importance than our commercial relations with the Orient."

Every country bordering on the Pacific Ocean is a partner in the Alaska-Yukon-Pacific Exposition, and as this is the first world's fair designed to exploit the resources of these countries, an active interest has been taken to insure its success by every country that has been asked to participate. The exhibits will show the natural resources of the Pacific countries comprehensively and will bring before the world the importance of the commerce of the Pacific.

Considerably more than half the people of the world live in the countries which border on the Pacific Ocean. The latest statistics, furnished by the United States Department of Commerce and Labor, give these countries, exclusive of the United States, an area of 17,096,060 square miles and a population of 904,353,000. Their imports aggregate \$1,853,334,000 annually and their exports \$1,893,642,000, making their total foreign trade \$3,746,976,000.

These figures show the importance of the Pacific trade, and when it is further shown that despite the fact that the United States is much nearer the countries of the Pacific than Europe, it only receives about one-fifth of this trade, the importance of closer commercial relations between the United States and the Pacific countries may be realized. The latest statistics show that the trade of the United States with the countries bordering on the Pacific amounts to \$718,000,000 annually, of which amount \$396,000,000 is represented by imports and \$322,000,000 by exports.

The principal purpose of the Alaska-Yukon-Pacific Exposition is to increase the traffic between the United States and the countries bordering on the Pacific. By showing the importance of these countries in the world of commerce the 1909 exposition will be the means of bringing a much larger proportion of the trade to the United States. The great commercial interests of this country will be impressed with the importance of the trade which is now practically neglected, and the people of these countries will be shown the importance of closer commercial relations with the United States by the same means.

In order to fully carry out the purposes of the exposition the foreign exhibits will be largely confined to the countries bordering on the Pacific. Australia, Canada, Ceylon, Chile, China, Colombia, Costa Rica, Ecuador, Formosa, Korea, French East Indies, German Colonies, Guatemala, Honduras, British India, Japan, Mexico, Dutch East Indies, Nicaragua, New Zealand, Panama, Peru, Philippine Islands, Hawaii, Strait Settlements, Siam and Salvador will be represented with exhibits showing their natural resources. The exposition has found great favor in these countries and the exhibits of their products will be the main feature of the exposition.

The exposition will also correct the many wrong impressions that exist regarding Alaska. When that country was purchased from Russia it was generally regarded as an Arctic waste. Since that time it has paid nearly \$11,000,000, nearly twice the amount of the purchase price, to the United States Government in revenues, and has produced more than \$125,000,000 in gold, \$96,000,000 in fish and \$80,000,000 in furs. Even after its vast mineral wealth has been made known to the world, Alaska is still largely regarded as of no value except for its gold mines and fisheries. The United States Department of Agriculture has recently established that much of

the northern country is valuable as agricultural lands. A recent report of the Department sets forth that Alaska can furnish homesteads of 320 acres each to 200,000 families and has abundant resources to support a population of 3,000,000 persons. Oats, rye, barley and wheat have been successfully grown in Alaska, and such vegetables as potatoes, cabbage, lettuce, radishes, beets, turnips, celery and others of the same nature are raised in different sections of the country. Strawberries, gooseberries, cranberries, currants and other small fruits have also proven a success in the northern country. All of these things will be shown comprehensively in the Alaska exhibit at the 1909 exposition.

The Alaska-Yukon-Pacific Exposition is further advanced at this time than was ever known in a similar period of the history of any world's fair, and when the gates are formally opened next June every detail of the big fair will be complete, every exhibit will be in place and the debris of construction will be entirely removed from the grounds.

Eight of the largest buildings were completed early in November. These are the Auditorium, Fine Arts, Machinery Hall, Agriculture, Manufactures, Fisheries, Oregon State and California State buildings. The cascades and geyser basin are finished, the Mines, Forestry and Washington State buildings are rapidly nearing completion, and work has been commenced on the Government buildings, which consist of separate structures for Alaska, Hawaii and the Philippine Islands, in addition to the main Government structure. The Arctic Brotherhood and a number of the smaller exhibit buildings are under construction, and the Canadian Government has begun work on its building.

The exposition grounds are located within 20 min. ride from the business section of Seattle, on the unused portion of the campus of the University of Washington, and border on two large land-locked bodies of water—Lake Washington and Lake Union. When the management selected the site it was an unimproved forest, and in the work of landscaping care has been taken to preserve the natural beauties wherever possible. From a scenic standpoint, the grounds are asserted to be the most ideal that it would be possible to secure for a large undertaking of the character of the Alaska-Yukon-Pacific Exposition.

### A Large Vanadium Steel Order.

What is said to be the largest order for vanadium steel ever placed in this country has recently been given by the Ford Motor Company, Detroit, Mich., to the United Steel Company, Canton, Ohio. This order calls for 2100 tons in all, consisting of type D, vanadium steel for springs; type N, vanadium case hardening steel, and type A, vanadium steel for axles, forge parts, gears, &c. The new Ford car will be built throughout of vanadium steel.

Recent tests of vanadium steel, made by the United Steel Company, show the following physical results, these results being obtained from the raw steel just as it comes from the rolling mill before being properly annealed or heat treated: Type A: Tensile strength, 111,250 lb.; elastic limit, 82,500 lb.; elongation, 27 per cent.; reduction of area, 64 per cent. Type D: Tensile strength, 140,000 lb.; elastic limit, 94,800 lb.; elongation, 7½ per cent.; reduction of area, 31 per cent. Type N: Tensile strength, 55,000 lb.; elastic limit, 36,200 lb.; elongation, 29.2 per cent.; reduction of area, 65.6 per cent.

By proper heat treatment the results on type A above given can be increased nearly 100 per cent. For example, a recent test of this type, under proper heat treatment, shows: Tensile strength, 216,500 lb.; elastic limit, 207,000 lb.; elongation, 12 per cent.; reduction of area, 48 per cent.

The United Steel Company has been furnishing the Ford Motor Company its different types of vanadium steel for the past three years.

The Atlas Engine Works, Indianapolis, Ind., manufacturer of steam engines and boilers, has opened an office in room 1806 Machesney Building, Pittsburgh, with R. W. Oswald in charge.

### Customs Decisions.

#### Retort Settings Are Firebrick.

A decision of much interest to importers and handlers of retort settings has been handed down by the United States Circuit Court of Appeals in the cases of Wing & Evans and Fred. Behrend, wherein it is held that the articles which are composed of earthy or mineral substances are dutiable by similitude to firebrick. The collector of customs held that the classification should be under paragraph 97, providing for "earthy or mineral substances of carbon, if not decorated." When the case came before the Board of General Appraisers, that tribunal held that the collector had erred and that the articles should be accorded entry as "firebrick," at the rate of \$1.25 per ton. While the effect of the decision of the Circuit Court of Appeals is the same as the conclusion reached by the Board of Appraisers, Judge Ward, in his decision for the court, says that under the provision for firebrick, sustained by the board, the bricks must weigh not more than 10 lb. The firebricks in question weigh more than 10 lb., and as a consequence the Court of Appeals finds that, while the merchandise in question weighs more than 10 lb., it is, nevertheless, dutiable by similitude to firebrick of lesser weight. In his decision for the Court of Appeals Judge Ward, whose conclusions are indorsed by Judge Lacombe, says in part:

These retort settings are admittedly firebrick, and they are certainly not susceptible of decoration within this construction of the act; that is to say, though any article can be decorated, these never are decorated, and it would be absurd to do so. They therefore cannot be said to be enumerated in paragraph 97, and, although firebrick, they are not enumerated in paragraph 87, because weighing more than 10 lb. each they are expressly excluded from it. We are left to determine under section 7 (the similitude clause) what enumerated clause they most resemble in material, quality and texture. Obviously they resemble firebrick. Indeed, they are firebrick.

Judge Noyes files a dissenting opinion.

#### Clock Chimes.

According to an interpretation of the tariff law made by the Board of General Appraisers, the provision in paragraph 191 of the Tariff act, for clocks and parts thereof, does not include devices separately imported, which are susceptible of use other than as parts of clocks. The decision was directed to importations of chimes which Niebrugge & Day entered. The Collector of Customs assessed duty at the rate of 45 per cent. under the metal schedule, whereas the importers claimed the tax should be 40 per cent. as "parts of clocks," in view of the fact that they can be used on clocks. In denying the contention of the importers, General Appraiser Sharretts has this to say:

We are of opinion that tubular chimes designed for and exclusively used in the construction of hall clocks are included in the provision for parts of clocks, but we do not think that a device which does not form a part of the mechanism of a clock, although it is an adjunct thereof, which is also intended to serve other uses, when imported separately is dutiable under paragraph 191.

It appears that the importers, in their testimony, admitted that the chimes in question are used as door chimes as well as in clocks. No alteration, it was admitted, was necessary to adjust the chimes to doors. This admission Mr. Sharretts holds is fatal to the claim that the articles are "parts of clocks."

#### Gaskets of Asbestos and Metal.

It has been decided by the Board of General Appraisers that so-called gaskets, made of thin, flat, annular packing pieces of asbestos and metal are dutiable under the metal schedule at the rate of 45 per cent. ad valorem, and not at 25 per cent. as manufactures of asbestos. The plea of the Packard Motor Car Company, Detroit, the importer of the gaskets, is accordingly overruled and the decision of the collector affirmed.

#### Steel Plates for Engravers' Use.

The United States Circuit Court of Appeals has sustained the contention of W. B. Sellers regarding the classification to accrue on steel plates for engravers' use. The Appellate Court sustains the contention raised by the attorneys for the importer. Objection was made by the importer to the assessment of 45 per cent. as a "manufacture of metal" as made by the collector. On

the other hand, the importer alleged that the plates should be admitted to duty under the provision in the revenue law for "steel plates." According to this claim, the merchandise pays 4 7-10 cents per pound and 1 cent per pound additional as polished steel plates. Both the Board of United States General Appraisers and Judge Hough in the Federal Circuit Court had found in favor of the importer.

#### Needles.

A decision has been handed down in the case of Charles Seitz, holding embroidery machine needles dutiable at 25 per cent. under the tariff provision for "needles not specially provided for." The collector's assessment of 45 per cent. as "manufactures of metal" is reversed. The board sustained a protest by Strauss Bros. and others. It was held that hand sewing needles imported in paper containers are free of duty. The collector's assessment of 45 per cent. is reversed.

#### Steel Wire.

In adjudicating a controversy between the Government and the A. Leschen & Sons Rope Company of St. Louis, the Board of United States General Appraisers has decided that there is nothing in the various provisions of the tariff act to prevent importers adding to invoice values for the purpose of obtaining lower duties in instances where high class goods pay less duty than those of lower grade. The merchandise in question consists of round steel wire, the invoiced value of which was less than 4 cents per pound. If the wire had been entered as invoiced it would have been subject to duty at the rate of 2 cents per pound under paragraph 137, but the importer added a sum on entry sufficient to make the value of the wire slightly more than 4 cents per pound. The local appraiser in his official return of the wire approved the invoiced value, but declined to accept the advance made on the entry of the goods, alleging that the increased value added by the importer was more than the correct foreign value. The importer being dissatisfied then appealed to the Board of Appraisers for relief. In forwarding the official papers in the case to the board, the surveyor at St. Louis has this to say:

The United States appraiser, upon examination of the merchandise, reports that he found it to consist of steel wire, advanced by the importer to more than the correct market value, and by so doing reducing the duty to be paid. Such being the case the wire was returned as under No. 16, dutiable at 2 cents per pound, under paragraph 137.

General Appraiser Fischer, who writes the decision for the board and sustains the right of the importers to add to invoiced values on entry even though such action reduces the amount of duties to be paid, discusses this rather technical case in detail. He says:

The advance made by the importer, if it must be accepted for dutiable purposes, results in reducing the duty on the merchandise below the amount assessable on the basis of the invoice and appraised values. The reason for this is that paragraph 137 provides certain specific rates on wires according to their gauge, but provides also that, if any of these wires shall cost over 4 cents per pound, duty shall be levied thereon at the rate of 40 per cent. ad valorem. It thus happens that wire valued at 3½ cents per pound (smaller than No. 16) would pay a duty of 2 cents per pound or about 52 per cent. ad valorem, while a dearer wire valued at 4½ cents per pound would, at the rate of 40 per cent., pay a specific equivalent of only 1.6 cents per pound.

Mr. Fischer remarks that it may be true in this case that the invoice value was the true and correct market value of the merchandise, and that the importer's advance on entry to make the value higher than the actual market value of the merchandise was for the sole object of reducing the duty. On this point the decision says:

But in view of the language of section 7 of the customs administrative act, as amended by section 32 of the tariff act of 1897, we do not see how the position of the Government in assessing the rate of duty complained of can be sustained. That section of the act as amended requires that "the duty shall not, however, be assessed in any case upon an amount less than the invoice or entered value," and as the duty was based on an amount less than the entered value, it cannot stand. If the advance on entry to make proper market value was not made in good faith by the importer, provisions may possibly be found in the statutes the enforcement of which would tend to stop such action. On the record before us we sustain the protest and reverse the decision of the surveyor.

It is the impression at the offices of the board that the issue will be taken into the courts in order to make a thorough test of the question.



## PERSONAL.

James M. Swank, general manager of the American Iron and Steel Association, was honored February 13 by having conferred upon him the degree of Doctor of Laws by Temple University, Philadelphia, in consideration of the valuable services he has rendered the iron and steel business in this country. A number of prominent representatives of the trade attended the ceremonies.

As successor to the late Bennett H. Brough, G. C. Lloyd has been appointed to represent Great Britain on the Council of the International Association for Testing Materials. J. E. Stead and F. W. Harbord have been named as additional members for Great Britain on the Committee on Nomenclature of Iron and Steel. The association holds its fifth congress at Copenhagen this year, and several members of the American Society for Testing Materials are expected to attend.

J. D. Edmonds has resigned his position as superintendent of works for the Sterling Electric Company, La Fayette, Ind., and has opened an engineering and sales office at 1913 Fisher Building, Chicago.

F. D. Johnson, chairman and managing director of the Consolidated Pneumatic Tool Company, London, England, which is the foreign department of the Chicago Pneumatic Tool Company, sailed for Europe Wednesday, after a stay in this country of about two weeks.

Henry M. Huxley, for several years connected with the Worcester District of the American Steel & Wire Company, and later with the Duplex Metals Company, as assistant general manager and manufacturer, has become associated with Brown & Williams, patent attorneys, Monadnock Block, Chicago. He will make a specialty of patents dealing with the manufacture of iron, steel and wire products.

Edgar S. Cook, president of the Warwick Iron & Steel Company, Pottstown, Pa., sailed for Europe February 11, expecting to spend some time in southern France.

Joseph A. Holmes, in charge of the technologic branch, United States Geological Survey, received the honorary degree of doctor of science at the first annual convocation of the University of Pittsburgh, at Carnegie Music Hall, February 12. Dr. Holmes delivered an address on "The Conservation of Our National Resources."

C. W. Blackman, formerly with the Parish & Bingham Company, Cleveland, Ohio, manufacturer of pressed steel frames for automobiles, has resigned and is now connected with the Driggs-Seabury Ordnance Corporation, Sharon, Pa., in the capacity of general sales agent.

W. C. Coffin has been appointed structural engineer of the Jones & Laughlin Steel Company, Pittsburgh, to succeed F. L. Garlinghouse, resigned, and R. A. McKean has been appointed superintendent of the company's Keystone Structural Works, on Second avenue, Pittsburgh. These appointments are effective from February 15. Messrs. Coffin and McKean were formerly connected with the Ritter-Conley Mfg. Company, Pittsburgh.

Dr. H. M. Howe, consulting metallurgist, New York, has returned from a trip to Europe.

R. K. Le Blond of the R. K. Le Blond Machine Tool Company, and Philip Fosdick of Cincinnati, Ohio, sailed February 11 on the Grösser Kurfürs for an extended trip to the Mediterranean.

The superintendents of open hearth plants of the Carnegie Steel Company visited Youngstown, Ohio, last week as guests of Thomas McDonald of the company's Ohio Works.

W. H. Lally, formerly general sales agent for the Scottsdale Foundry & Machine Company, Scottsdale, Pa., has resigned to accept a position with the Kilbourne & Jacobs Company, Columbus, Ohio, manufacturer of cars for industrial railroads.

Dr. Heroult, the inventor of the electric furnace and of the steel process bearing his name, sails to-day for France. He will probably return in the spring.

Of the proposal to make a storage reservoir of Lake Superior and thus greatly reduce fluctuations in level of

the other Great Lakes, the *Engineering News* says that as the water power companies operating at the Sault are responsible for lowering the general level of Lake Superior, it would be necessary, if regulating works were put at the outlet of the lake, to condemn the water power properties or to restrict their operations. A bill has been introduced in Congress appropriating \$250,000 toward the expense of such condemnation. It is believed, however, that by extending the regulating works over the free channel to a sufficient extent the interference with the present water power plants could be made comparatively small.

At the annual meeting of the Chicago Pneumatic Tool Company, New York, W. O. Duntley was elected president, succeeding J. W. Duntley, resigned; John R. McGinley, chairman of the board, to succeed C. M. Schwab, resigned; Charles Booth, vice-president, succeeding W. O. Duntley, and W. A. Mitchell, assistant secretary; the other officers were re-elected.

## OBITUARY.

GEORGE C. BELCHER, Worcester, Mass., superintendent of the Arcade Malleable Iron Company, and widely known in the foundry trade in New England, died suddenly February 9, aged 64 years. He was a native of Easton, Mass., and had learned the trade of molder. Early in his career his practical knowledge and administrative ability were recognized, and he was successively in charge of foundries at Easton and Attleboro, Mass.; Woonsocket, R. I., and Boston. In 1907 he became superintendent of the Arcade foundry. He leaves a widow and four children.

CARL F. DEUBY, secretary and superintendent of the Cleveland Foundry Company, Cleveland, Ohio, died February 14, aged 37 years.

ALEXANDER BEAUDRY, Boston, Mass., widely known as a designer and manufacturer of power hammers and presses and president and treasurer of Beaudry & Co., Inc., is dead, at the age of 70 years. He was a native of France and his early education was obtained in Canada. As a young man he came to the United States and practiced his trade of blacksmith, conducting a shop in Boston. Of inventive turn, his first venture was an adze for carpenters' use. In the late '70s he designed his first power hammer and in 1880 established the business of its manufacture, now known as Beaudry & Co., Inc. For some years he has taken no active part in the management. The patents issued to him, chiefly on presses and hammers, number nearly 30. He was a widower and leaves no family.

## The British Iron Trade at a Standstill.

At the beginning of the second week in February the outlook in the British iron trade was disappointing. Some hope had been entertained that the new year would bring a change for the better, but many works are still closed down and at others the production is at only a fraction of the usual rate. Rail mills seem to be best supplied with orders, and the usual price is £5 5s., or about \$25.50. While ship plates in the North of England are selling at about £8, demand is light, and the same condition prevails in shapes. Specifications in all lines are coming in slowly, and steel manufacturers in Scotland have encountered the competition of merchants who have made prices below those of the mills. The Cleveland pig iron market shows a downward tendency, and on February 5 Cleveland warrants touched 48 shillings 2½ pence, while makers were selling No. 3 Cleveland iron at 48 shillings 6 pence. The stock of Cleveland pig iron in Connal's stores at the end of January was 156,407 tons, an increase for the month of 20,093 tons. The shipments from the Cleveland District in January were only 75,434 tons, which, with the exception of that for December, was the smallest total for any month since February, 1905.

## The Pressed Steel Car Company.

The tenth annual report of the Pressed Steel Car Company presents the following condensed balance sheet, as of December 31, 1908:

Assets.	
Properties and franchises January 1, 1908 .....	\$26,756,015.53
Additions and betterments during 1908. ....	288,515.94
	<u>\$27,039,531.47</u>
Less depreciation charged off at close of year 1908. ....	110,000.00
	<u>\$26,929,531.47</u>
Securities—stocks owned.....	2,504,383.62
Taxes and insurance not accrued.....	37,218.84
Current assets:	
Accounts receivable.....	\$668,104.61
Stock of materials on hand.....	246,509.58
Cash in banks.....	2,837,989.80
	<u>3,752,603.99</u>
Total.....	<u>\$33,223,737.92</u>
Liabilities.	
Capital stock—common.....	\$12,500,000.00
Capital stock—preferred.....	12,500,000.00
	<u>\$25,000,000.00</u>
Five per cent. first mortgage gold notes, payable \$500,000 annually.....	1,000,000.00
Purchase money mortgage—McKees Rocks plant, 4 per cent.....	\$235,000.00
Purchase money mortgage—Allegheny plant, 4 per cent.....	75,000.00
	<u>310,000.00</u>
Current liabilities:	
Accounts payable.....	\$189,532.01
Accrued salaries and wages.....	37,001.40
Accrued interest.....	21,017.55
Accrued preferred dividends.....	218,750.00
	<u>446,300.96</u>
Surplus and undivided profits:	
Surplus—January 1, 1908.....	\$6,413,579.42
Profits for year 1908.....	265,477.59
	<u>\$6,679,057.01</u>
Deduct depreciation and renewals .....	\$110,000.00
Deduct dividends on preferred stock.....	875,000.00
	<u>985,000.00</u>
	<u>5,694,057.01</u>
Reserve for contingencies.....	773,379.95
Total.....	<u>\$33,223,737.92</u>

From President F. N. Hoffstot's accompanying remarks, the following extracts are taken:

The gross sales of the company for the year ending December 31, 1908, were \$8,589,422.29. Over 70 per cent. of this amount was sold during the first three months. The decreased sales during the last nine months of the year resulted in the freight car shops being practically idle. The net profits for the year were \$265,477.59, all of which resulted from operation of the plants, except \$40,292.50 received from dividends on some of the securities held.

The profits for the first three months amounted to considerably more than the net profits for the entire year, but idleness of plants, due to lack of orders, resulting from the serious business depression, and the fixed charges necessitated in holding together the important parts of the company's organization, reduced the earnings for the year. The usual liberal charges have been made to expense account for renewals of plant and machinery.

Perhaps there is no better way of illustrating how serious the depression was in the year 1908 than by stating that at one time during the year there was in the employ of this and subsidiary companies, excepting the Canada Car Company, Ltd., but 10 per cent. of the maximum number employed by the same companies during the year 1907. That this was not exceptional is disclosed by statistics published in the trade papers which show that, apart from the cars railroad companies ordered built in their own shops, only 39,000 cars were ordered in the United States from car builders, as against an average annual requirement of, say, 200,000 cars. Practically no car orders were placed prior to August 1, and most of them after November 1, so that few, if any, of these orders were filled during the year 1908.

As this company's success and future earnings must depend almost entirely upon the business of the railroads

of the country, it seems proper that you be advised of the conditions which now confront them and which practically govern the company's future operations: Reduced volume of business and consequent inability to maintain earnings; hampered by semiofficial Governmental objection to the reduction of wages which have heretofore been governed by supply and demand; little or no encouragement from the public or railroad commissions favorable to an increase in rates, while everything required for construction and operation costs as much or more; public demands for efficiency and regularity of service greater now than ever before—such is the present condition of this company's purchasers, the railroad companies.

On the other hand, materials which enter into the cost of the company's product are selling for almost as high, and in many cases as high, as at any time during the last five years, and notwithstanding the cost of assembling of material and the construction of cars have been greatly reduced since the industry began, in some cases over 50 per cent., yet owing to the cost of materials it is not possible to make prices that are specially attractive to the railroad companies at a time when their equipment is not fully occupied. While it is true that cars deteriorate almost as much when idle as when in service, and that everything points to the fact that within the next few years all wooden cars will have to be replaced by steel cars, there is no indication that railroad managers will soon take active steps to replace their equipment. When the business of the railroad companies will become normal and when there will be return of demand for this company's product is something that depends entirely upon a change of present conditions and the resumption of activity in the general business world.

A moderate amount of business was booked during the last quarter which should, if added to during the year, result in profit to the company, but it is impossible at this time to predicate any results.

During the early part of the year it developed that there would be large cash balances which would not be required in the company's business, and it was decided to anticipate in August, 1908, the eighth annual installment of \$500,000 due February 1, 1909, which was done, leaving unpaid \$1,000,000, due as follows: \$500,000 February 1, 1910, and \$500,000 February 1, 1911.

During the year, by reason of the diminished output, a favorable opportunity was presented to carefully consider various accounts and funds held contingently, with the result that the allowances for inventory heretofore made were found to be more conservative than was believed at the time, and that various accounts and funds held contingently or in suspense were released by the occurrence of events, or accrued in the ordinary course of business, and the sum of \$773,379.95 becomes available through these sources. The directors believe that it is wise to place this amount to the credit of a fund for reserve for contingencies.

The steel passenger car department for the first time contributed to earnings, and the business booked for next year indicates a continuance of revenue from this source, but, as this output is not great, the profits at the best cannot amount to a large sum. If the railroads can be prevailed upon to adopt and maintain a common standard throughout their passenger equipment, thus reducing the initial cost for dies, drawings, &c., and so have that cost absorbed over a greater number of units, the price of a steel passenger car will be brought down to a point which will make it so attractive that there will be a larger volume of business. The successful operation not only on electric traction and subway lines, but on steam railroads, with the almost entire disappearance of adverse criticism as to the appearance, and all other opposition at first directed against the steel passenger car, means, it is believed, that it will be generally adopted and the greater the number that are in use the nearer the price will be brought to that of a wooden passenger car. The Canada Car Company, Ltd., has been in successful operation during the entire year, with the result that it was possible to pay off all the floating debt. Quarterly preferred dividends at the rate of 7



per cent. per annum were begun in October. Three years 7 per cent. dividends have accrued on the preferred stock and one of these was paid in December. Canada has felt the 1907-1908 depression to a certain extent, but not so severely as the United States. The large amount of construction work going on under Government supervision, with money being supplied directly and indirectly by the Government, the large grain crop being garnered and shipped early, all help the situation, and it is reasonable to expect an earlier resumption of normal conditions there than in the United States.

### The Franco-Canadian Trade Treaty.

TORONTO, February 13, 1909.—Advices cabled to Ottawa from Paris bring the news that Mr. Fielding has consented to such a modification of the Franco-Canadian trade convention as makes it acceptable to the French Senate.

Of the numerous classes of Canadian articles to which the treaty opens the privileges of the French minimum tariff, many items relate to iron, steel and other metals, and to machinery and other finished products made of iron and steel.

The treaty calls for a direct steamship service between the two countries. That is to say, the concessions granted are conditional upon the merchandise being conveyed without transshipment from a part of one country to a part of the other. France, however, may use the port of any third country enjoying the privileges of Canada's preferential or intermediate tariff, and Canada may transship at the port of any third country enjoying the French minimum tariff. This means that transshipment at a British port will not disqualify goods from either for entry at the rates of duty stipulated in the treaty.

As was mentioned in this correspondence earlier in the course of the negotiations for this treaty, one effect calculated upon is the attracting of industries to Canada to make goods for the French market. That object, indeed, was aimed at by the Government when it introduced the intermediate tariff. It was believed that European countries would be likely to come to Canada's terms for securing the benefits of this tariff, and as such reciprocal arrangement would almost certainly be more favorable than any obtainable by European countries from the United States, Canada would tend to draw branches of manufacturing works from the other side of the border. It remains to be seen whether the French concessions the present treaty gives Canada will suffice to cause any drift of American manufacturing enterprise to Canada. Canada already had the Hamilton plant of the International Harvester Company, which can hardly fail to reap substantial advantage from the treaty. But the present minimum duties of France are likely to be materially increased in the coming revision of the French tariff. In the London *Times* of the 1st inst. the scale of minimum duties now engaging the French Tariff Commission's attention is dealt with as is the scale of proposed maximum duties by the Paris letter in the last issue of *The Iron Age*. In the *Times* the honorary secretary of the British Chamber of Commerce in Paris says that it is the opinion of even many Frenchmen that the schedules of the proposed new tariff constitute a distinct menace to the *entente cordiale* between the commercial communities of France and Great Britain. Yet Britain is to have the most favored-nation treatment; that is, she will enjoy the benefits of the new minimum rates as she does the existing minimum rates. When the British Chamber of Commerce in Paris considers the new minimum duties of so restrictive tendency, Canada may be disappointed with the result of the treaty.

C. A. C. J.

**Iron Ore Concentration at Sheridan, Pa.**—The American Gröndal Kjellin Company, 45 Wall street, New York, has installed a testing plant at Sheridan, Pa., in connection with the Berkshire Iron Works, for the concentration of iron ore according to the Gröndal system. At present more than 30 concentrating plants of this type are in operation in Europe, and for the purpose of making the process better known ores will be treated

free of charge at the Sheridan plant. The installation consists of a crusher, a Ball mill for the production of fines and a No. 5 Gröndal separator. The capacity of this testing plant is 3 or 4 tons an hour.

### The American Iron & Steel Mfg. Company.

The ninth annual report of the American Iron & Steel Mfg. Company presents a condensed balance sheet as of December 31, 1908, which compares as follows with the showing made a year before:

<b>Assets.</b>		1908.	1907.
Cash .....	\$1,489,351.68	\$1,278,706.56	
Bills receivable.....	1,051.34	22,709.12	
Accounts receivable, net.....	591,009.43	693,522.43	
Inventory at cost prices.....	1,560,005.02	1,441,592.37	
Insurance and taxes—unexpired value .....	5,887.17	11,581.84	
<b>Total current assets.....</b>	<b>\$3,647,304.64</b>	<b>\$3,448,112.32</b>	
Real estate, plants and equipments.....	\$5,493,278.74	\$5,336,685.65	
Less reserve to provide for depreciation .....	764,000.00	734,000.00	
<b>Total fixed assets.....</b>	<b>\$4,729,278.74</b>	<b>\$4,602,685.65</b>	
<b>Total assets.....</b>	<b>\$8,376,583.38</b>	<b>\$8,050,797.97</b>	
<b>Liabilities.</b>		1908.	1907.
Wages accrued, not due.....	\$69,957.66	\$20,116.32	
Accounts payable.....	275,769.84	3,382.26	
<b>Total current liabilities.....</b>	<b>\$345,727.50</b>	<b>\$23,498.58</b>	
Preferred stock.....	\$3,000,000.00	\$3,000,000.00	
Common stock.....	2,550,000.00	2,550,000.00	
Undivided profits at this date, subject to the payment of dividends on preferred and common stock, authorized but payable January 1..	2,480,855.88	2,477,299.39	
	\$8,030,855.88	\$8,027,299.39	
<b>Total liabilities.....</b>	<b>\$8,376,583.38</b>	<b>\$8,050,797.97</b>	

In an accompanying statement Chairman Arthur Brock says: "The year was one of very considerable depression in the iron and steel industries, and the company had to bear its share of the curtailment of production and shrinkage in prices. It was, however, deemed wise to continue to make improvements to plants and equipment, and \$156,593.09 was expended for these purposes. The allowance for depreciation of plants and machinery now amounts to \$764,000, which sum has been deducted from the value of real estate, plants and equipments."

The directors for 1909 are as follows: Arthur Brock, chairman of the board; Edward Bailey, Horace Brock, Edward R. Coleman, Thomas Evans, W. C. Freeman, H. H. Light, James Lord, H. M. M. Richards, J. H. Sternbergh and H. M. Sternbergh. The executive officers are James Lord, president; John Penn Brock, vice-president; H. M. M. Richards, treasurer; D. G. Scott, secretary. The Executive Committee consists of Arthur Brock, Horace Brock, Edward R. Coleman and W. C. Freeman. The general offices are at Lebanon, Pa.

**A New Midland Blast Furnace.**—The Midland Steel Company, Pittsburgh, Pa., has plans made and will soon let contracts for the erection of a second blast furnace at Midland, Pa., which is about 40 miles west of Pittsburgh, on the Ohio River, below Beaver, Pa. The company's present furnace, which was blown in in September, 1906, has a capacity of about 400 tons a day and has produced chiefly basic iron. The new furnace will have a capacity of about 250 tons a day, and is intended to manufacture foundry iron of special grades for the Pittsburgh market. From Midland to Pittsburgh the freight on pig iron is 60 cents, while from Mahoning and Shenango Valley furnaces it is 90 cents. H. C. Fownes is president of the Midland Steel Company; J. Ramsey Speer, vice-president; William C. Fownes, Jr., secretary, and Charles McKnight, treasurer.

The Cambria Steel Company, Johnstown, Pa., is turning out an order for 250 steel mining cars to be delivered to the Berwind-White Coal Mining Company, Windber, Pa.

## NEWS OF THE WORKS.

## Iron and Steel.

The Ward-Dickey Steel Company, Indiana Harbor, Ind., is about to contract for a new building to double the size of its present mill.

Mary Furnace of the Ohio Iron & Steel Company, at Lowellville, Ohio, was blown out February 1 and a number of changes will be made in the stack. The size of the furnace will be increased, a casting machine will be added, and other improvements and additions made which will somewhat increase its capacity. The furnace is expected to be ready for blast again about June 1. The contract for making the repairs to the furnace has been placed with the Meehan Boiler & Construction Company, Lowellville.

The Canada Iron Corporation, Ltd., will build a new blast furnace at Midland, Ont. Frank C. Roberts & Co., Philadelphia, Pa., are the engineers for the work.

The William B. Pollock Company, Youngstown, Ohio, has completed the erection of a No. 6 furnace at the Ohio Works of the Carnegie Steel Company, Youngstown, Ohio, and the new stack will be blown in this month, while No. 5 furnace is also about completed and will probably be started at an early date. The company had the contract for the iron work at the entire six furnaces of the Carnegie Steel Company at the Ohio Works, Youngstown. It has received an order from the Shenango Furnace Company for important repairs and improvements to its No. 3 furnace at Sharpville, Pa., which is being remodeled throughout. Eight ft. is being added to the shell of the furnace, a new top is being built, also new downcomers, dust catcher and gas mains. The Brown Hoisting Machinery Company, Cleveland, Ohio, is installing at No. 3 furnace one of its patented inclined skips and top. The storage bins are also being enlarged in size and otherwise improved.

The Standard Tin Plate Company, Canonsburg, Pa., has placed contracts for the building of four additional hot mills, which will give it a total of 10 hot mills in its plant.

The Youngstown Works of the National Tube Company is being dismantled. Charles Huster of Youngstown has bought the buildings and is wrecking them.

The Youngstown Steel Company has re-elected its officers, as follows: E. L. Ford, president; Paul Jones, vice-president; John Stambaugh, secretary and treasurer. The company's blast furnace is being rebuilt and improved, and will shortly be ready for operation.

No. 2 stack of the Republic Iron & Steel Company at Haselton, Ohio, was blown in last week. This company has four stacks in the Youngstown District and two in the Shenango Valley, all of which are in operation at present.

## General Machinery.

Louis Friedman, Fairmount, Ind., wholesale dealer in second-hand pipe, oil and gas well supplies and scrap iron, is building a new shop for threading pipe and repairing engines and boilers.

The Board of Control of Winnipeg, Man., will receive bids until March 2 for repair shop equipment for the Point du Bois hydraulic electric plant.

The Maxwell machine shop at Redlands, Cal., will be occupied by Van Deventer Brothers, who are adding new machinery with a view to fitting the plant for automobile repair work.

The St. Cloud Iron Works, St. Cloud, Minn., recently incorporated its business with a capital stock of \$75,000, all of which is owned by Henry Dyer, president; Joseph B. Rosenberger, secretary and treasurer; Margaret Rosenberger and Catherine Dyer. The company reports such a large demand for its column cutting lathes, granite polishing machines and hand travelers that it expects to build an addition to its plant to provide necessary facilities to take care of its increased business. Column cutting lathes have been shipped to San Francisco and Vermont, and two will be shipped to Massachusetts in about two weeks. As soon as plans have been prepared for the addition to its plant the company will probably be in the market for new machinery, but at this time it does not know just what will be required.

The Marion Steam Shovel Company, Marion, Ohio, whose new steel foundry is now in successful operation, is making arrangements for large additions to its machine shops, erecting department and other parts of the plant.

The Charles Ross & Son Company, Brooklyn, N. Y., has sent out a new list of rebuilt second-hand machinery.

The Lewis Foundry & Machine Company, Pittsburgh, works at Groveton, Pa., is furnishing the California Industrial Company, Los Angeles, Cal., a 14-in. roll train to be operated with its present 9-in. train, and to the United States Horseshoe Company, Erie, Pa., two No. 5 shears to cut 2-in. square, one No. 3 shear to cut 2½-in. square, a standard 16-in. three-high housing for use with the 16-in. mill, with rolls for same, and also some miscellaneous rolls for rolling various products.

Henry Schafer, Dunkirk, N. Y., has announced that he will start construction early in the spring of a fireproof automobile

garage, one story, 30 x 50 ft., in connection with which he will install machinery for automobile repairing.

## Power Plant Equipment.

Plans are being made for the enlargement of the city electric light plant of Dermott, Ark.

The City Clerk of Muskogee, Okla., will receive bids until March 29 for a 4,000,000-gal. high service pump, 5,000,000-gal. low service pump and a 250-hp. tubular boiler.

The Water Works Commission of Spartanburg, S. C., will receive bids until March 1 for one 110-hp. water tubular boiler and one 2,000,000-gal. high duty pumping engine.

Consulting Engineer Fred Fish of the Fish & Horton Company, Rochester, N. Y., has completed plans and bids will be received by the Board of Village Trustees, Bergen, N. Y., for a municipal lighting plant, until February 20. The equipment for the plant includes one 270-hp. boiler, one 50-hp. engine, one 35-kw. direct current generator, one 100-hp. feed water heater, pump, high pressure piping, &c.

## Bridges and Buildings.

The Corrugated Bar Company, St. Louis, Mo., manufacturer of corrugated squares and rounds for concrete construction, is erecting a new building at Youngstown, Ohio, to be used as a warehouse and fabricating shop. The enlarged facilities are made necessary by the increased demand for its fabricated material.

## Foundries.

John Westover, Lincoln, Neb., a contractor in bridge and building ironwork, is organizing a company which contemplates the erection of a new foundry of considerable capacity. Plans are not yet definitely outlined, but the building contemplated will be 100 x 100 ft.

The Quinn Wire & Iron Works, formerly located at Jefferson, Iowa, has completed the construction of a new plant at Boone, Iowa, which it is about ready to occupy. Articles have been filed for the incorporation of the company, with a capital stock of \$50,000. The plant, which consists of a machine shop and foundry, is fully equipped to turn out hardware specialties and gray iron castings.

## Fires.

The roundhouse and division shops of the Canadian Pacific Railroad at Portage La Prairie, Man., were destroyed by fire February 11, the loss being about \$50,000.

The car repair shops of the New York Central Railroad at Lyons, N. Y., were burned February 12. The loss is placed at \$20,000.

The machine department of the Oshkosh Boat Works, Oshkosh, Wis., was damaged \$18,000 by fire February 9.

The plant of the Cascade Mfg. Company, Waterloo, Ia., was damaged \$15,000 by fire February 9.

The plant of the H. W. Johns-Manville Company at Milwaukee, Wis., was burned February 13, the loss being \$100,000.

The Boston & Lockport Block Company's plant at Lockport, N. Y., was burned February 13, with a loss of \$100,000.

On February 10 the plant of the Safe Padlock & Hardware Company at Lancaster, Pa., was damaged \$50,000 by fire.

The axle and machine shops of the Edward J. Gardner Axle & Machine Company, Carlisle, Pa., were damaged \$50,000 by fire February 7.

The foundry of the Cahill Iron Works, Chattanooga, Tenn., was burned February 13, the loss being about \$20,000.

The machine shop of the Webb-Hildreth Company, Gloversville, N. Y., was damaged \$7000 by fire last week. The building was rented and the company's loss was entirely on the machinery and stock.

## Hardware.

The Central Indiana Fence & Wire Company, Kokomo, Ind., has lately been incorporated, with \$10,000 capital stock, to manufacture woven wire fence. The incorporators are Casper Butler, Robert W. Butler, Ernest Walton, Harvey C. Thomas and F. W. Macke. Robert W. Butler is president of the company, F. W. Macke, vice-president, and Casper Butler, secretary-treasurer.

## Miscellaneous.

The New Castle Forge & Bolt Company, New Castle, Pa., manufacturer of car forgings, chain bolts, nuts, rivets and wrought washers, states that the increase in its capital stock from \$300,000 to \$450,000 was to provide additional working capital, and that no extensive improvements or additions to its plant are contemplated at present.

W. G. McKenny & Co., Twenty-eighth and Smallman streets, Pittsburgh, dealers in new and second-hand iron and steel machinery, &c., have purchased the entire equipment of the Pennsylvania Bed Company, Thirty-fifth and Smallman streets, in that city, recently offered at public sale, and are engaged in removing it. The equipment includes tubular boilers, engines, boiler feed pumps, blowers, belting, cupolas, heaters, &c. This firm makes a specialty of buying and wrecking plants and operates all over the country, having branch offices in several large cities.



Taylor & Dean, Pittsburgh, manufacturers of fire escapes and ornamental iron work, will, about March 1, remove from 205 Market street to their new warehouse at Twenty-fifth street and Penn avenue.

The Wray Pump & Register Company, Rochester, N. Y., which for a number of years has been manufacturing automobile pumps and registers under patents of George W. Kellogg, has been succeeded by the Kellogg Mfg. Company. The increasing demand for its products has made it necessary to increase the capital and facilities. In addition to its present line, the new company intends to manufacture a quick detachable engine driven air pump and a four-cylinder regular equipment air pump which is designed to be used as a tire inflater as well as a power pump for supplying air for blowing whistles on motor boats. Spark timers will also be made. George W. Kellogg is president; J. F. Weller, vice-president and secretary, and M. R. Anstice, treasurer.

The business of William B. Burke, Rochester, N. Y., dealer in iron, steel, shafting, heavy hardware, blacksmith and wagon supplies, &c., which was established in 1838, has been incorporated as the William B. Burke Iron & Steel Company. William B. Burke is president; James Burke, vice-president; Webster H. Kline, secretary, and H. May Rogers, treasurer.

The Youngstown Car Mfg. Company, Youngstown, Ohio, reports that since January 1 it has taken more new business than for the same period in the last two years, although it has been fairly busy during the depression. The company has considerable work on its books, composed of steel coal mine cars, platform cars, core oven cars, rail cars for various Pennsylvania manufacturing plants, ore cars for Virginia, billet cars and turntables for shipment to Ohio, platform trucks, a large order for mine cars and skips for ore interests in New Jersey and Wisconsin, dump cars for Kentucky, portable track and dump cars for New York, and an export order for sugar cane cars, cement cars for Mexico, besides orders for miscellaneous equipment for various points.

The Standard Wire Company, New Castle, Pa., manufacturer of wire specialties, has added a tinning department to its plant which enables it to tin shapes up to 30 in. long. The company expects to issue a new catalogue about March 11 covering its main products.

The Wm. B. Scaife & Sons Company, Pittsburgh, manufacturer of the We-Fu-Go and Scaife water softening, purifying and filtering systems, has found it necessary to build an addition to its present plant at Oakmont, Pa., to accommodate increased business in the building of systems for the purification of water for steam boilers, industrial and domestic uses, and is about to begin the erection of a shop 40 x 200 ft., equipped with the latest improved machinery, which will be used in addition to the present shops for manufacturing the We-Fu-Go and Scaife systems. The company has under construction at the present time for steam boiler plants systems aggregating 95,000 hp., in addition to plants for softening and clarifying water to be used in manufacturing processes such as dyeing and bleaching in woolen and cotton mills and for washing in laundries, also a number of mechanical gravity filter systems for manufacturing and domestic uses. Among some recent contracts are the following: Pittsburgh-Buffalo Company, Canonsburg, Pa., 1000-hp. system; Merchants Ice & Cold Storage Company, Terre Haute, Ind., 750-hp. system; Auburn & Syracuse Electric Railroad, Auburn, N. Y., 750-hp. system; Columbia Plate Glass Company, Blairsville, Pa., 3000-hp. system; John A. Manning Paper Company, Troy, N. Y., 750-hp. system; Natrona Water Company, Natrona, Pa., 500,000-gal. mechanical gravity filter system; Edwards & Chapman, Springfield, Ill., 3000-gal. per hour system; Jenner-Quemahoning Coal Company, Holsopple, Pa., 6000-gal. per hour system, boilers and town supply.

G. W. McClure, Son & Co., Bessemer Building, Pittsburgh, recently received a contract for the construction of a three-pass firebrick McClure hot blast stove, 18 x 75 ft., for the Union Furnace Company, Buffalo, N. Y., and has just received a duplicate order from the same company.

The Empire Polishing & Buffing Wheel Company, Springfield, Mass., has made arrangements to move its plant to Cocksack, N. Y., and has reorganized under the name of the Union Wheel & Mfg. Company, with a capital stock of \$30,000. The company will engage in the manufacture of polishing and buffing wheels and polishers' and platers' supplies. The incorporators are F. H. Sutherland, M. C. Richtmyer, E. J. Miller, W. R. Church and James G. Newbury of Cocksack, N. Y., and W. C. Van Alstyne of Albany.

The Union Shoe Polishing Machine Company, Robinson Building, Elmira, N. Y., has been organized to manufacture an automatic coin in the slot, motor driven shoe polishing machine. Working drawings for the various parts of the machinery have been completed and will be manufactured under contract by various firms. The company contemplates building a factory building in the near future, which will be devoted to assembling and manufacture of minor parts. The officers are Major John F. Sadler, president; J. F. Tracy, treasurer, and C. F. Bromley, secretary.

The Hancock Mfg. Company, manufacturer of lubricators and various brass specialties, Marshall, Mich., has under con-

sideration the moving of its factory to another city and the erecting of a complete new plant, including brass foundry, machine shop, &c. Negotiations are under way and will probably be consummated for the locating of the plant at Medina, N. Y.

The Auto-Car Mfg. Company has been incorporated at Buffalo, N. Y., with a capital stock of \$250,000, to take over and continue the business of the Auto-Car Equipment Company, manufacturer of auto trucks, sight-seeing cars and other motor propelled heavy commercial vehicles. The object of the reincorporation is to secure a more comprehensive name and increased capitalization for the manufacture of its products on a more extended scale. A new plant is to be built and equipped on a site recently purchased at Elmwood and Hertel avenues. Geo. W. Atterbury is president.

The Valley Boat & Engine Company has been incorporated at Baldwinsville, N. Y., with a capital stock of \$20,000, to manufacture gasoline and electric motors, engines, &c. The incorporators are Dwight S. Simpson, Rees H. Hubbell and Josiah Tallmadge.

### The Court of Patent Appeals Bill.

WASHINGTON, D. C., February 16, 1909.—The House Judiciary Committee has made a favorable report on bill H. R. 21,455, introduced by Representative Currier, chairman of the House Patent Committee, creating a United States Court of Patent Appeals. The bill was originally referred to the Patent Committee, by which it was favorably reported, but it was subsequently sent to the Judiciary Committee in order that its constitutionality might be passed upon.

The bill creates a court of five judges, of which one, the chief justice, is to be appointed by the President, with the advice and consent of the Senate, and is to hold his office for life. The other four are to be Federal judges in office either as circuit or district judges designated for service in the Court of Patent Appeals for stated periods. It is believed that this scheme of selecting judges would result in the creation of the best and strongest tribunal that could be chosen. The court is to have jurisdiction "to hear and determine appeals and writs of error from final judgments and decrees in the circuit courts of the United States in cases arising under the laws of the United States relating to patents for inventions and from final judgments and decrees in cases arising under the laws of the United States relating to patents for inventions rendered by any other court having jurisdiction under the laws of the United States to hear and decide such cases in the first instance."

The necessity for the creation of this new court has arisen in recent years. Such a court as proposed in the pending bill would provide a tribunal to which all appeals from the lower courts would lie, and which would obviate the diverse rulings of the circuit courts of appeal in the various circuits which have caused so much hardship to inventors, manufacturers, and dealers.

W. L. C.

**West Penn Steel Company Contracts.**—The West Penn Steel Company, recently organized at Pittsburgh, and which will build a plant at Brackenridge, Pa., for the manufacture of steel sheets, has placed practically all its contracts for buildings and equipment. The contract for the steel buildings was given to the Fort Pitt Bridge Works, Pittsburgh, and calls for about 1100 tons of steel. There will be two main buildings, one 75 x 368 ft., to contain the open hearth furnaces and bar mill, while the other building will be 80 x 312 ft., with a 50-ft. lean-to, to contain the three hot mills and the cold mills, provision being made for additional mills when necessary. The United Engineering & Foundry Company, Pittsburgh, has been given a contract by the concern for a 30-in. bar mill and tables; Mesta Machine Company, 40 x 60 in. Corliss engine with rope drive connection to operate sheet mills, and a 38 x 60 in. Corliss engine direct connected to bar mill; Phoenix Iron Works, 250 hp. engine to operate a 200-kw. General Electric Company generator; Wickes Boiler Company, battery of boilers aggregating 1400 hp. Contracts for the open hearth furnaces have not been awarded. The officials of the company expect to have the plant in operation by September 1.

## The Iron and Metal Trades

The question of making radical reductions all along the line in finished products, with the exception of Steel Rails, is being given very serious consideration, and it may be that a decision may be announced at any moment. The impression had been widespread that it would not be until the proposals of the Ways and Means Committee were known, toward the middle of next month, that an adjustment of prices would be undertaken. There seems to be a disposition in some quarters to put aside any consideration of the tariff and deal with the situation on the basis of trade conditions.

A careful detailed study of the Steel Rail situation has been made with the object of ascertaining whether a reduction in the price would bring out tonnage enough to compensate producers at least partially, but the conclusion reached was that it did not. The New York Central System has virtually placed orders for Steel Rails which are estimated to aggregate from 85,000 to 90,000 tons. Of this the Illinois Steel Company has booked 23,100 tons, the Carnegie Steel Company about 19,500 tons, the balance going probably to the Lackawanna Steel Company. The Colorado mill has secured 6200 tons for an Arizona road, and some minor orders have been placed. The Delaware & Hudson and the Long Island roads are in the market each for 4000 tons. The competition of rerolling mills is affecting the prices for Light Rails, and low prices are being made.

The Pennsylvania lines East have placed orders for 2200 steel cars, 1000 of which went to Cambria and 1000 to the American Car & Foundry Company. It is authoritatively stated that there is no truth in the report that the latter company would build a Steel plant and roll its own Plates and Shapes. On the contrary, it is probable that the company will build a new car shop at Gary, and draw its supplies from the Indiana Steel Company.

The Pig Iron markets are dull in all the leading distributing centers, and there are some signs of weakness. The market has not been seriously tested for some time, although there are a few inquiries of magnitude which may define the situation. Several lots of 1000 tons of Ferromanganese have been sold during the week, at close to \$42, Baltimore.

The Southern shops have been getting some good business for Cast Iron Pipe, among them being 8700 tons for Kansas City.

Some of the independent Coke makers in the Connellsville District are closing down rather than continue to meet the present low prices, which are \$1.60 for prompt shipment on Furnace Coke and \$1.90 to \$2 for standard 72-hr. Foundry Coke.

Electrolytic Copper is now available at 13½c. for the home market and 13c. for export. Only a moderate amount of business is going and consumers are not taking hold. Spelter is 10c. lower, and is quoted 4.80c., St. Louis. Desilverized Lead can be bought at 4.05c., or below the quotation of the American Smelting & Refining Company, which is 4.10c. Soft Missouri is available at 4c.

## A Comparison of Prices.

Advances Over the Previous Month in Heavy Type, Declines in Italics.

At date, one week, one month and one year previous.

Feb. 17, Feb. 10, Jan. 20, Feb. 19, 1909. 1909. 1909. 1908.

### PIG IRON, Per Gross Ton:

Foundry No. 2, Standard, Philadelphia .....	\$17.00	\$17.00	\$17.25	\$18.25
Foundry No. 2, Southern, Cincinnati .....	16.25	16.25	16.25	15.75
Foundry No. 2, Local, Chicago ..	16.50	17.00*	17.35*	18.10*
Basic, delivered Eastern Pa. ....	16.75	16.75	16.75	17.25
Basic, Valley Furnace .....	15.00	15.25	15.50	16.00
Bessemer, Pittsburgh .....	15.90	16.90	17.40	17.90
Gray Forge, Pittsburgh .....	15.15	15.15	15.40	15.90
Lake Superior Charcoal, Chicago ..	19.50	19.50	19.50	21.50

### BILLETS, &c., Per Gross Ton:

Steel Billets, Pittsburgh .....	25.00	25.00	25.00	28.00
Forging Billets, Pittsburgh .....	27.00	27.00	27.00	30.00
Open Hearth Billets, Phila. ....	26.20	26.20	26.20	30.40
Wire Rods, Pittsburgh .....	33.00	33.00	33.00	35.00
Steel Rails, Heavy, at mill .....	28.00	28.00	28.00	28.00

### OLD MATERIAL, Per Gross Ton:

Steel Rails, Melting, Chicago ..	14.50	14.50	14.50	13.00
Steel Rails, Melting, Phila. ....	15.50	15.50	16.75	15.00
Iron Rails, Chicago .....	18.25	18.25	18.50	17.00
Iron Rails, Philadelphia .....	19.00	19.00	21.25	18.00
Car Wheels, Chicago .....	15.25	15.25	15.50	15.00
Car Wheels, Philadelphia .....	15.50	15.50	16.00	16.50
Heavy Steel Scrap, Pittsburgh ..	15.50	15.50	16.50	13.75
Heavy Steel Scrap, Chicago .....	13.50	13.50	14.00	12.50
Heavy Steel Scrap, Philadelphia ..	15.50	15.50	16.75	15.00

### FINISHED IRON AND STEEL,

Per Pound:	Cents.	Cents.	Cents.	Cents.
Refined Iron Bars, Philadelphia ..	1.47	1.50	1.55	1.65
Common Iron Bars, Chicago .....	1.50	1.50	1.50	1.65
Common Iron Bars, Pittsburgh ..	1.50	1.50	1.50	1.50
Steel Bars, Tidewater, New York ..	1.56	1.56	1.56	1.76
Steel Bars, Pittsburgh .....	1.40	1.40	1.40	1.60
Tank Plates, Tidewater, New York ..	1.76	1.76	1.76	1.86
Tank Plates, Pittsburgh .....	1.60	1.60	1.60	1.70
Beams, Tidewater, New York .....	1.76	1.76	1.76	1.86
Beams, Pittsburgh .....	1.60	1.60	1.60	1.70
Angles, Tidewater, New York .....	1.76	1.76	1.76	1.86
Angles, Pittsburgh .....	1.60	1.60	1.60	1.70
Skelp, Grooved Steel, Pittsburgh ..	1.45	1.45	1.45	1.70
Skelp, Sheared Steel, Pittsburgh ..	1.50	1.50	1.50	1.80

### SHEETS, NAILS AND WIRE,

Per Pound:	Cents.	Cents.	Cents.	Cents.
Sheets, Black, No. 28, Pittsburgh ..	2.50	2.50	2.50	2.50
Wire Nails, Pittsburgh .....	1.95	1.95	1.95	2.05
Cut Nails, Pittsburgh .....	1.75	1.75	1.75	2.00
Barb Wire, Galv., Pittsburgh .....	2.40	2.40	2.40	2.50

### METALS, Per Pound:

	Cents.	Cents.	Cents.	Cents.
Lake Copper, New York .....	13.50	13.50	14.50	12.87½
Electrolytic Copper, New York ..	13.12½	13.25	13.75	12.62½
Spelter, New York .....	4.92½	5.05	5.10	4.75
Spelter, St. Louis .....	4.80	4.90	4.95	4.80
Lead, New York .....	4.05	4.10	4.20	3.75
Lead, St. Louis .....	3.90	3.92½	4.05	3.65
Tin, New York .....	28.80	28.45	28.00	28.15
Antimony, Hallett, New York .....	8.00	8.00	8.00	9.00
Nickel, New York .....	45.00	45.00	45.00	45.00
Tin Plate, 100 lb., New York .....	\$3.89	\$3.89	\$3.89	\$3.89

\* These quotations have been changed from prices at furnace to delivered prices at foundries. The 35c. is for switching charges.

## Prices of Finished Iron and Steel, F.O.B. Pittsburgh.

Freight rate from Pittsburgh in carloads, per 100 lb.: New York, 16c.; Philadelphia, 15c.; Boston, 18c.; Buffalo, 11c.; Cleveland, 10c.; Cincinnati, 15c.; Chicago, 18c.; St. Paul, 32c.; St. Louis, 22½c.; New Orleans, 30c.; Birmingham, Ala., 45c. Rates to the Pacific Coast are 80c. on Plates, Structural Steel, and Sheets, No. 11 and heavier; 85c. on Sheets, Nos. 12 to 16; 95c. on Sheets, No. 16 and lighter; 65c. on Wrought Pipe and Boiler Tubes.

**Structural Shapes.**—I-Beams and Channels, 3 to 15 in., inclusive, 1.60c., net; I-Beams over 15 in., 1.70c., net; H-Beams over 8 in., 1.80c.; Angles, 3 to 6 in., inclusive, ¼ in. and up, 1.60c., net; Angles, over 6 in., 1.70c., net; Angles, 3 x 3 in. and up, less than ¼ in., 1.50c., base, half extras, Steel Bar card; Tees, 3 in. and up, 1.65c., net; Zees, 3 in. and up, 1.60c., net; Angles, Channels and Tees, under 3 in., 1.50c., base, half extras, Steel Bar card; Deck Beams and Bulb Angles, 1.90c., net; Hand Rail Tees, 3c., net; Checkered and Corrugated Plates, 3c., net.

**Sheets.**—Blue Annealed Sheets, No. 10 and heavier, 1.80c.; Nos. 11 and 12, 1.85c.; Nos. 13 and 14, 1.90c.; Nos. 15 and 16, 2c.; Box Annealed, Nos. 17 to 21, 2.25c.; Nos. 22 to 24, 2.30c.; Nos. 25 and 26, 2.35c.; No. 27, 2.40c.; No.



28, 2.50c.; No. 29, 2.60c.; No. 30, 2.70c. Galvanized Sheets, Nos. 10 and 11, 2.45c.; Nos. 12 and 14, 2.55c.; Nos. 15 and 16, 2.65c.; Nos. 17 to 21, 2.80c.; Nos. 22 and 24, 2.95c.; Nos. 25 and 26, 3.15c.; No. 27, 3.35c.; No. 28, 3.55c.; No. 29, 3.70c.; No. 30, 3.95c.; No. 28, Painted Roofing Sheets, \$1.75 per square, and Galvanized Roofing Sheets, No. 28, \$3.10 per square, for 2½-in. corrugations. These prices are subject to a rebate of 5c. per 100 lb. to the large trade, under the usual conditions, jobbers charging the usual advances for small lots from store.

**Plates.**—Tank Plates, ¾ in. thick, 6¼ in. up to 100 in. wide, 1.60c., base, at mill, Pittsburgh. Extras over this price are as follows:

Tank, Ship and Bridge quality, ¾-in. thick on edges, 100 in. wide, down to but not including 6 in. wide, is taken as base.

Steel Plates up to 72 in. wide, inclusive, ordered 10.2 lb. per square foot, shall be considered ¾-in. Plate. Steel Plates over 72 in. wide must be ordered ¾-in. thick on edge, or not less than 11 lb. per square foot, to take base price. Steel Plates over 72 in. wide ordered less than 11 lb. per square foot down to the weight of 3-16-in. shall take the place of 3-16-in.

Percentages as to overweight on Plates, whether ordered to gauge or weight, to be governed by the Association of American Steel Manufacturers' Standard Specifications.

Gauges under ¼-in. to and including 3-16-in. Plates on thin edges.....	\$0.10
Gauges under 3-16-in. to and including No. 8.....	.15
Gauges under No. 8 to and including No. 9.....	.25
All sketches (excepting straight taper Plates varying not more than 4 in. in width at ends, narrowest end being not less than 30 in.).....	.10
Complete Circles.....	.20
Boiler and Flange Steel Plates.....	.10
"A. B. M. A." and ordinary Firebox Steel Plates..	.20
Still Bottom Steel.....	.30
Marine Steel.....	.40
Locomotive Firebox Steel.....	.50
Shell grade of Steel is abandoned.	
For widths over 100 in. up to 110 in.....	.05
For widths over 110 in. up to 115 in.....	.10
For widths over 115 in. up to 120 in.....	.15
For widths over 120 in. up to 125 in.....	.25
For widths over 125 in. up to 130 in.....	.50
For widths over 130 in.....	1.00

TERMS.—Net cash 30 days. Pacific Coast base, 1.50c., f.o.b. Pittsburgh.

**Merchant Steel.**—Smooth Finished Machinery Steel, 1.80c. to 1.90c.; Flat Sleigh Shoe, 1.75c. to 1.85c.; Cutter Shoe Steel, 2.15c. to 2.25c.; Toe Calk, 1.90c. to 1.95c.; Railroad Spring Steel, 1.60c. to 1.75c., the higher prices being for Pennsylvania Railroad analysis. Carriage Spring Steel is 1.80c.; Tire Steel, Iron finish, 1½ x ½ in. and heavier, 1.40c.; under 1½ in., 1.55c. Planished Tire Steel is 1.60c., all f.o.b. at mill.

**Wrought Pipe.**—Discounts on Steel Pipe, ¾ to 6 in., to the large trade, are 75 and 5 per cent. off list, while a few of the very largest jobbers, that have mill connections, are given 76 and 5 per cent. off list. Regular discounts are as follows:

Merchant Pipe.		Jobbers, carloads, Steel.	
		Black.	Galv.
¾ to 1 in.....		.67	.61
1 in.....		.69	.55
1½ in.....		.71	.59
2 to 6 in.....		.75	.65
7 to 12 in.....		.72	.57
Extra strong, plain ends:			
¾ to 1 in.....		.60	.48
1 to 4 in.....		.67	.55
4½ to 8 in.....		.63	.51
Double extra strong, plain ends:			
¾ to 8 in.....		.56	.45

Discounts on Genuine Iron Pipe are as follows:

	Black.	Galv.
¾ to 1 in.....	.65	.53
1 in.....	.67	.57
1½ in.....	.69	.59
2 to 6 in.....	.73	.63
7 to 12 in.....	.70	.55
Extra strong, plain ends:		
¾ to 1 in.....	.58	.46
1 to 4 in.....	.65	.53
4½ to 8 in.....	.61	.49
Double extra strong, plain ends:		
¾ to 8 in.....	.54	.43

**Boiler Tubes.**—Regular discounts are as follows:

Boiler Tubes.		Iron.	Steel.
1 to 1½ in.....		.42	.47
1½ to 2½ in.....		.42	.59
2½ in.....		.47	.61
2½ to 5 in.....		.52	.65
6 to 18 in.....		.42	.59
2½ in. and smaller, over 18 ft. long, 10 per cent. net extra.			
2½ in. and larger, over 22 ft. long, 10 per cent. net extra.			

**Wire Rods.**—Bessemer Rods, \$33; Chain Rods, \$33; Basic Rods, \$34.

The next meeting of the New York Section, Society of Chemical Industry, will be held at the Chemists' Club, 108 West Fifty-fifth street, on the evening of February 19. Several papers will be presented. Members and their friends will have the usual informal dinner before the meeting at the café of the Hotel Savoy, Fifth avenue and Fifty-ninth street, at 6.30 p.m.

## Chicago.

FISHER BUILDING, February 17, 1909.—(By Telegraph.)

New Rail orders secured last week by the Illinois Steel Company, amounting in all to 24,500 tons, constituted the leading feature in the development of new business. The tonnage is relatively small, considering the source from which the bulk of it comes, and is in no wise significant of any change of attitude on the part of the railroads. New orders for other rolled products are light and scarce, and the aggregate of specifications is at least not increasing. It is doubtful if the stocks of finished material in the hands of jobbers and manufacturers have been lower in the past 18 months than they are now. At the same time there is a fair volume of consumption in most lines, but it is being taken care of by prompt mill shipments. Whether it be due to the proposed tariff revision as a primary cause or to other agencies, it is quite evident that buyers have no confidence in the stability of prices, nor do they find any assurance in the general unsteadiness of values observed in practically all finished products except Heavy Rails. For the past 10 days heavy snowstorms have been prevalent throughout the West, which have delayed traffic and caused much temporary inconvenience, but this will be more than compensated by the protection afforded to growing crops. After a period of idleness of more than three weeks, occasioned by a causeless strike, work on the Chicago & Northwestern depot and approaches has been resumed. A curious feature of this strike was the fact that neither the employers nor workmen were advised as to the reason for which it was called. The labor leaders, after a couple of weeks or delay and under pressure, finally formulated some demands, none of which of any importance were granted.

**Pig Iron.**—While no definite improvement is noted in the general demand, there was a little more tonnage involved in last week's sales than in those of the two or three preceding weeks. Trading was pretty largely confined to Northern Iron, of which one interest sold 1000 tons of Foundry for delivery through the remainder of the first half at \$17 at furnace. This, however, is a top price and is not generally obtained in open market competition. As a whole, the market is weaker, and the number of sales made below current quotations of both Northern and Southern Iron indicate the establishment of a lower level, to reflect which prices are this week revised. Inquiries amounting in all to between 6000 and 7000 tons for first half deliveries have engaged the attention of the Pig Iron houses during the week. The inquiries in which this tonnage was included were few, at least 5000 tons being accounted for in three of them. A considerable portion of the demand was for Malleable Bessemer. The attitude of the leading Southern furnaces is no longer uncompromisingly steady at \$13, Birmingham, for No. 2 Foundry. This is especially manifested by a recent sale which is reported to have been made at \$12.50. Melters are pretty well provided with Pig Iron for the present and are in no haste to cover for future requirements. The following quotations are for February and March delivery, f.o.b. Chicago:

Lake Superior Charcoal.....	\$19.50 to \$20.00
Northern Coke Foundry, No. 1.....	17.00 to 17.50
Northern Coke Foundry, No. 2.....	16.50 to 17.00
Northern Coke Foundry, No. 3.....	16.00 to 16.50
Northern Scotch, No. 1.....	17.50 to 18.00
Southern Coke, No. 1.....	17.35 to 17.85
Southern Coke, No. 2.....	16.85 to 17.35
Southern Coke, No. 3.....	16.35 to 16.85
Southern Coke, No. 4.....	15.85 to 16.35
Southern Coke, No. 1 Soft.....	17.35 to 17.85
Southern Coke, No. 2 Soft.....	16.85 to 17.35
Southern Gray Forge.....	15.35 to 15.85
Southern Mottled.....	15.10 to 15.60
Malleable Bessemer.....	16.50 to 17.00
Standard Bessemer.....	17.90 to 18.40
Jackson Co. and Kentucky Silvery, 6 %	19.90 to 20.40
Jackson Co. and Kentucky Silvery, 8 %	20.90 to 21.40
Jackson Co. and Kentucky Silvery, 10 %	22.90 to 23.40

(By Mail.)

**Billets and Rods.**—Only a few scattered orders for small lots of Forging Billets are being placed. These represent, in the main, the actual needs of machinery builders, the most of whom, outside of agricultural implement makers, are running light. Wire Rod specifications continue to come in at a fairly good rate, but not much is expected in the way of new contracts for several weeks.

**Rails and Track Supplies.**—In the distribution of the New York Central's Rail order allotments have been made of 23,100 tons to the Illinois Steel Company and 19,000 tons to the Carnegie Steel Company, the specifications calling for Bessemer Rails. The Illinois Steel Company has also secured an order from the New Orleans Southern for 1400 tons. Other inquiries amounting to around 20,000 tons are under consideration. It is reported that the 6200 tons for which the El Paso & Southwestern was in the market has been placed with the Colorado Fuel & Iron Company. The demand for Light Rails is somewhat disappointing; the bookings of the Illinois Steel Company for the present month up to this time amount to 2000 tons. Price conditions in Light Rails have undergone no change for the better, and much of

the business is being placed at \$2 to \$3 a ton and even more under the regular schedule of quotations.

**Structural Material.**—Judging from the number and variety of building enterprises under consideration, there should soon be a considerable volume of Structural business coming into the market. Despite the low price on fabricating work now prevailing, very little is coming out at present. Two contracts taken by the Richards-Noalke Company, at Indianapolis, aggregating 1240 tons, included 900 tons for the Patriot Realty Company's building, St. Louis, and 250 tons for the First National Bank Building, Fort Smith, Ark., both calling for Bethlehem Shapes. The Soo Line placed an order for 410 tons of Girders for local improvements in St. Paul with the Bethlehem Steel Company. The Interstate Bridge Company, Cleveland, secured 159 tons of bridge Steel from the city of Spokane, and a lot of 50 tons for a Neosho, Minn., school building went to the Brown Iron Works, Minneapolis. Little outside business was secured by the American Bridge Company, but its bookings included 650 tons of fabricated material for the Steel Corporation's mining interests; more work of the same kind is in prospect, which will call for considerable additional tonnage in the near future. The forge shop of the American Bridge Company is running reasonably full, and new orders taken last week amounted to 1400 tons. An order for something over 1000 tons, to be used in the construction of a 12-story bank and office building for Wick Brothers, Youngstown, Ohio, was placed with the Cambria Steel Company through its Chicago office by D. H. Burnham, architect. Specifications for plain material are insufficient to furnish the mills with full rolling schedules.

**Plates.**—While the entire volume of Plate orders and specifications is exceedingly small, the meagerness of demand for Sheared Plates is especially pronounced. Building construction and car work are furnishing some business in Universal Plates, but the boiler and tank shops are not doing much and are buying accordingly. Complaints of price cutting are becoming more emphatic, and it is stated that comparatively small lots are being taken at \$1 to \$3 a ton under regular prices.

**Sheets.**—The Texas trade of Western Sheet mills and jobbers, which at this season of the year is usually of considerable volume, has been sharply curtailed by the discriminating freight rates in effect from Eastern points. What business has been taken in Texas common point territory has necessarily been secured at unsatisfactory prices, owing to the competitive advantage of Eastern producers. The demand from other sections is such as comes from the actual needs of consumption, and is not expanding. The Sheet mill of the Inland Steel Company is operating at about 65 per cent. of capacity. Regular prices are being shaded \$2 a ton or more by some mills, and the stress of competition is such as to increase rather than diminish this tendency.

**Bars.**—Notwithstanding the demand for Steel Bars is more uniform and regular than for most other mill products, it is only satisfactory in a relative sense. Specifications continue to come out at a fairly good rate, showing on the whole some gain. Those entered by the leading interest in the first fortnight in February are stated to have been in excess of any similar period in three months. The demand for Bar Iron is largely of a hand to mouth character, the aggregate being sufficient to keep the mills going only part of the time. Prices are on the whole fairly well maintained, although some deviation from the recognized basis is reported. Mill quotations, Chicago, are as follows: Steel Bars, 1.58c., with half extras; Iron Bars, 1.50c.; Hoops, No. 13 and lighter, 1.98c., full extra Hoop card; Bands, No. 12 gauge and heavier, 1.58c., half extras, Steel Bar card; Soft Steel Angles and Shapes, 1.68c., half extras.

**Merchant Pipe.**—A moderate increase in the tonnage of Merchant Pipe booked last week affords a ray of encouragement. At the same time the general situation has not changed in any material respect. The indications are that the movement will be one of ups and downs until the spring demand commences.

**Boiler Tubes.**—No improvement is noted in the demand for either Merchant or Locomotive Tubes. Mill shipments are extremely light, the small lots required by the shops being furnished from jobbers' stocks.

**Merchant Steel.**—Last week's specifications included a number of good orders for Tire Steel from the vehicle factories, and the aggregate from jobbers and implement manufacturers showed some improvement. In common with other products, the demand is, however, limited to current requirements, which are considerably under the average expected at this season of the year.

**Cast Iron Pipe.**—The only transaction involving considerable tonnage included the requirements of the Kansas City water works amounting to 9000 tons which was awarded to the United States Cast Iron Pipe & Foundry Company. Aside from this, a few small orders were entered. There seems to be a disposition on the part of the municipalities to defer placing orders for Pipe that will be needed in the spring, but it is expected that within a few weeks these consumers will come into the market in considerable number. We quote

nominally per ton, Chicago, as follows: Water Pipe, 4 in., \$28; 6 to 12 in., \$27; 16 in. and up, \$25, with \$1 extra for Gas Pipe.

**Metals.**—The entire list of Metals is dull and inactive. Buyers are plainly distrustful of the situation, and are not disposed to increase stocks. Copper holds fairly steady at present prices for current transactions. A further decline in Lead is noted, and the market is unsupported by liberal buying. There is little doing in Old Metals, and in consequence of the light demand prices are weaker. Quotations are as follows: Casting Copper, 13½c. to 14c.; Lake, 14¼c. to 14½c., in car lots, for prompt shipment; small lots, ¼c. to ½c. higher; Pig Tin, car lots, 30c.; small lots, 34½c.; Lead, Desilverized, 4.10c. to 4.20c., for 50-ton lots; Corroding, 4.35c. to 4.45c., for 50-ton lots; in car lots, 2¼c. per 100 lb. higher; Spelter, 5.10c. to 5.25c.; Cookson's Antimony, 10½c., and other grades, 9½c. to 10¼c.; Sheet Zinc is \$7, f.o.b. La Salle, in car lots of 600-lb. casks. On Old Metals we quote: Copper Wire, Crucible Shapes, 13½c.; Copper Bottoms, 11½c.; Copper Clips, 11½c.; Red Brass, 11½c.; Yellow Brass, 9½c.; Light Brass, 7c.; Lead Pipe, 4.30c.; Zinc, 3½c.; Pewter, No. 1, 21c.; Tin Foil, 23c.; Block Tin Pipe, 26c.

**Old Material.**—No railroad material was offered in the market last week, nor are there any new lists out at the present time. Very little is changing hands, and dealers are finding it more and more difficult to dispose of track consignments as they arrive. Under such circumstances the pressure to sell naturally weakens prices, and lots of this kind are being picked up by the mills at inside figures. Sales are so few and infrequent that it is impossible to gauge the level of values with accuracy, but it is safe to say that prices are weaker all along the line. The following prices are per gross ton, f.o.b. Chicago:

Old Iron Rails.....	\$18.25 to \$18.75
Old Steel Rails, rerolling.....	15.00 to 15.50
Old Steel Rails, less than 3 ft.....	14.50 to 15.00
Relaying Rails, standard sections, subject to inspection.....	22.50 to 23.50
Old Car Wheels.....	15.25 to 15.75
Heavy Melting Steel Scrap.....	13.50 to 14.00
Frogs, Switches and Guards, cut apart.....	13.50 to 14.00
Mixed Steel.....	11.75 to 12.25

The following quotations are per net ton:

Iron Fish Plates.....	\$15.00 to \$15.50
Iron Car Axles.....	18.50 to 19.00
Steel Car Axles.....	17.00 to 17.50
No. 1 Railroad Wrought.....	12.75 to 13.25
No. 2 Railroad Wrought.....	11.75 to 12.25
Springs, Knuckles and Couplers.....	13.00 to 13.50
Locomotive Tires, smooth.....	14.00 to 14.50
No. 1 Dealers' Forge.....	10.00 to 10.50
Mixed Busheling.....	7.75 to 8.25
Iron Axle Turnings.....	7.75 to 8.25
Soft Steel Axle Turnings.....	7.75 to 8.25
Machine Shop Turnings.....	7.75 to 8.25
Cast Borings.....	6.00 to 6.50
Mixed Borings, &c.....	6.00 to 6.50
No. 1 Mill.....	7.75 to 8.25
No. 2 Mill.....	6.75 to 7.25
No. 1 Boilers, cut to Sheets and Rings.....	9.50 to 10.00
No. 1 Cast Scrap.....	12.75 to 13.25
Stove Plate and Light Cast Scrap.....	11.75 to 12.25
Railroad Malleable.....	12.25 to 12.75
Agricultural Malleable.....	11.00 to 11.50
Pipes and Flues.....	9.50 to 10.00

## St. Louis.

St. Louis, Mo., February 15, 1909.

Among the important semipublic improvements which were begun last year were those of the United Railways, which involved the expenditure of about \$1,000,000. The company states that it intends to go on with this work and push it as rapidly as possible. It is expected that at least \$2,000,000 more will be expended during 1909 for new tracks and new cars. Furthermore, this will by no means complete the plans for betterment, since it is proposed to continue for several years. The cash resources of the various national banks are steadily growing. In deposits all the St. Louis banks have gotten back to their footing before the panic, and some are ahead of the showing at that time.

**Coke.**—The demand for Coke, considering the season of the year, is quite disappointing. It was thought that the low price would stimulate business, and no doubt this would be the case at the figures for which spot Coke can be bought, if consumers had sufficient storage room under cover. They do not seem disposed to buy for future delivery in a large way, and most of passing transactions are with parties who buy in small lots, both city and country. There does not appear to be any apprehension of higher prices by consumers or fear of supplies running short. With regard to prices there is some range, but this, for the most part, is governed by quality and time of delivery. No inquiries for round lots are reported. We quote, f.o.b. cars, Connellsville, 72-hr. Foundry, as follows: Spot, \$2.15; first or last half, \$2.25 to \$2.50.

**Pig Iron.**—In case of some of the sales agencies, business is reported to be somewhat better than last week, while others state there is less demand. The only inquiries mentioned were as follows: 1000 tons, No. 2 and 3 Southern



Foundry, shipment over the second and third quarter; 2000 tons Malleable Bessemer and 300 tons Low Phosphorus. There have been some sales of consignment iron and a moderate number of small lots, mostly for prompt or first quarter shipment. Offering of resale iron in this territory have been withdrawn. Notwithstanding the lack of demand from large buyers, prices on Southern iron for extended shipments are holding at the previous figures, though there is some weakness in Northern, with slight concessions on both for spot shipment. We quote as follows: No. 2 Southern Foundry, for shipment over the first half, \$13, f.o.b. Birmingham.

**Finished Iron and Steel.**—The demand for Structural Material is moderate and wholly for small lots from fabricators. Bars and Bar products are ruling quiet, with little demand from either jobbers or manufacturers from first hands. An inquiry is reported from a steam railroad for 2000 tons of Standard Rails, also some inquiry from traction lines. Lumber and mining interests have supplied their wants at present for Light Rails. The demand for Track Material is quite large and urgent.

**Old Material.**—Leading dealers report a very quiet market. Notwithstanding this, the large offerings of the railroads reported last week have been absorbed, some large dealers purchasing most of the lists on speculation, thus indicating confidence in an improvement. Some of the St. Louis track stuff has been shipped to markets where it will move more readily into consumption. There are no lists reported this week and no sales of importance. With respect to prices, it may be said that while nominally unchanged, concessions would have to be made to move round lots. We quote, per gross ton, f.o.b. St. Louis, as follows:

Old Iron Rails.....	\$18.00 to \$18.50
Old Steel Rails, rerolling.....	15.00 to 15.50
Old Steel Rails, less than 3 ft.....	14.00 to 14.50
Relaying Rails, standard sections, subject to inspection.....	23.50 to 24.50
Old Car Wheels.....	15.50 to 16.00
Heavy Melting Steel Scrap.....	13.25 to 13.75
Frogs, Switches and Guards, cut apart.....	13.50 to 14.00
Mixed Steel.....	9.75 to 10.25

The following quotations are per net ton:

Iron Fish Plates.....	\$15.50 to \$16.00
Iron Car Axles.....	19.50 to 20.00
No. 1 Railroad Wrought.....	13.50 to 14.00
No. 2 Railroad Wrought.....	12.50 to 13.00
Railway Springs.....	12.00 to 12.50
Locomotive Tires, smooth.....	13.00 to 13.50
No. 1 Dealers' Forge.....	11.00 to 11.50
Mixed Borings.....	6.50 to 7.00
No. 1 Bollers, cut to Sheets and Rings.....	9.50 to 10.00
No. 1 Cast Scrap.....	12.50 to 13.00
Stove Plate and Light Cast Scrap.....	10.00 to 10.50
Railroad Malleable.....	10.50 to 11.00
Agricultural Malleable.....	10.00 to 10.50
Pipes and Flues.....	10.00 to 10.50
Railroad Sheet Scrap.....	10.50 to 11.00
Railroad Grate Bars.....	11.00 to 11.50
Machine Shop Turnings.....	9.00 to 9.50

**Lead, Spelter, Etc.**—Lead continues very quiet. Pig Lead is selling at 3.85c. to 4c., East St. Louis. Lead Ore is held at \$25.50 to \$26 per 1000 lb., Joplin. The demand from consumers is light, far more so than usual at this season of the year. Spelter is dull at 4.72½c. to 4.80c. The disposition of buyers seems to have settled down to buying as required. Zinc Ore is quoted at \$35 to \$38 per ton, base. Conditions are likely to remain unchanged until the demand for the manufactured products is better. Tin is 1c. higher; Antimony 5c. per 100 lb. lower; Copper ¼c. lower. Manufactured products met with a light demand early in the week, but the demand was brisker at the close.

The Campbell Iron Company will erect a three-story and basement warehouse on Cass avenue, near Ninth street, and also a two-story office building adjoining the warehouse. Both will be built by the Chapline Realty & Construction Company.

A deal is underway for the location at St. Louis of one of the largest metal companies of Pittsburgh. It is reported that the plant will cost several hundred thousand dollars, and require at least 20 acres of ground.

A London cablegram of February 11 says that the judgment of the Privy Council in the case of the Dominion Iron & Steel Company, Sydney, Nova Scotia, against the Dominion Coal Company, handed down last week, is in favor of the steel company. It will be recalled that suit was brought for damages because of the alleged poor quality of coal furnished the steel company, and a decision for the plaintiff was given by the court at Sydney in September, 1907. An appeal was taken to the full bench of the Supreme Court of Nova Scotia, and in January, 1908, the decision was affirmed. The matter was then taken to the Privy Council at London. The claim for damages amounted on May 31, 1908, without interest, to \$2,923,808.

## Pittsburgh.

PARK BUILDING, February 17, 1909.—(By Telegraph.)

**Pig Iron.**—The Pig Iron market is still marking time, with only an occasional small lot being sold. Consumers seem to be pretty well covered and are not in a buying mood, believing that prices may be lower later on. Standard Bessemer iron is fairly strong, but prices on Basic, Gray Forge and Foundry are weak. We quote Bessemer iron, \$16; Malleable Bessemer, \$16.50 to \$16.75; Basic, \$15 to \$15.25; No. 2 Foundry, \$15, and Gray Forge, \$14.25, all at Valley furnace, the freight rate to Pittsburgh being 90c. a ton.

**Steel.**—The market is very dull as regards new sales, but consumers are specifying against contracts in a fairly satisfactory way. We quote Bessemer and Open Hearth Billets 3½ in. and larger, up to and including 0.25 carbon, \$25; 0.26 to 0.60 carbon, \$1 extra; over 0.60 carbon, \$2 extra, all f.o.b. Pittsburgh. For Wheeling, Martin's Ferry, Follansbee, Newcastle, Sharon, Steubenville and Washington (Pa.) delivery, half the freight, or 50c. additional, is charged. Sheet and Tin Bars in random lengths are \$27.50, f.o.b. Pittsburgh. Forging Billets take \$2 advance over Rolling Billets.

(By Mail.)

With practically the whole Steel market showing a strong tendency toward lower values, there is no incentive whatever for consumers to buy for their future requirements. The railroads are buying a little more freely, but the tonnage involved in their orders for Rails so far has been disappointing. The Pennsylvania Lines East have ordered 2200 Steel cars. A large inquiry is in the market for Roofing and Siding Sheets, which it is expected will pretty thoroughly test prices. Until the uncertainty as to the future of prices that now overhangs the market is removed it would be unreasonable to expect any marked increase in the demand. There is a good deal of talk, and a good deal is being printed, about the demoralization in prices, but this is no doubt much magnified. While there is no question that prices on some lines of Finished Iron and Steel are being shaded, as a rule the concessions are not as large as reported. Pig Iron is weak, and prices on Basic and Foundry are slightly lower. There is practically no new demand for Billets and Sheets and Tin Bars, but regular prices, in the main, are being observed. The Coke trade is extremely dull, and some independent operators have decided to shut down a large number of ovens, as too much Coke is being made. There is little doing in Old Material, and prices generally are weak. Some in the trade believe that there will be a swell in the demand early in March, due to the expected opening up of spring trade.

**Ferromanganese.**—A local consumer is reported to have bought about two cars, or about 50 tons, for this month and March delivery, at \$44, seaboard, or \$45.95, Pittsburgh.

**Ferrosilicon.**—The situation is very quiet. We quote 50 per cent. at \$62 to \$62.50, Pittsburgh.

**Muck Bar.**—The market is stagnant and prices are weak. We quote best grades of Muck Bar, made from all Pig Iron, at \$27, delivered, Pittsburgh, but on a firm offer and for any large tonnage this price might be shaded.

**Wire Rods.**—The new demand is light, and specifications against contracts are coming in at only a fairly satisfactory rate, and mostly in limited quantities.

**Steel Rails.**—The Carnegie Steel Company has received an order from the Pittsburgh & Lake Erie Railroad, a local line controlled by the New York Central, for 9450 tons, and another line operated by the New York Central is expected to place an order with the Carnegie Steel Company in a few days for about 10,000 tons. The Carnegie Company has booked in the past week orders for 2019 tons of Light Rails. Prices on Light Rails, rerolled from Old Rails, are weaker, and the gap in prices between these and Light Rails rolled from Billets is wider. Prices on Rerolled Light Rails are now quoted from \$3 to \$4 a ton under prices asked for Light Rails rolled from Billets. Regular prices on the latter are as follows: \$25 for 25 to 45 lb. Sections, with \$1 advance for 20-lb., \$2 advance for 16-lb., and \$3 advance for 12-lb. Standard Sections are \$28, at mill, and Angle Splice Bars, 1.65c., at mill.

**Skelp.**—The mills rolling Grooved and Sheared Iron Plates are fairly busy on specifications against contracts, but the new demand for both Iron and Steel Skelp is very dull. We quote: Grooved Steel Skelp, 1.45c. to 1.50c.; Sheared Steel Skelp, 1.50c. to 1.60c.; Grooved Iron Skelp,

1.75c. to 1.80c., and Sheared Iron Skelp, 1.90c. to 1.95c., Pittsburgh.

**Plates.**—The Pennsylvania Lines East have placed orders for 2200 Steel cars, of which 1000 went to the American Car & Foundry Company, 1000 to the Cambria Steel Company and 200 to the Middletown, Pa., Works. The Jones & Laughlin Steel Company will supply the Plates and Shapes, about 15,000 tons, for the cars to be built by the American Car & Foundry Company. In regard to the report that the latter company would build a Steel plant and finishing mills to roll its own Plates and Shapes, we can state that it will probably build a new car shop at Gary, Ind., and draw its supply of Plates and Shapes from the Indiana Steel Company. The general demand for Plates is dull, and prices on both narrow and wide sizes are being shaded from \$1 to \$2 a ton, and in some cases probably more.

**Structural Material.**—No local contracts have been placed and new work in this district in sight is very light. There is still much complaint about the low prices being made by some of the Steel companies, which, it is claimed, makes it practically impossible for fabricating concerns to compete and buy Plain Material at the regular prices.

**Sheets.**—An inquiry is in the market from the Fort Pitt Bridge Works for about 221,000 lb. of 20-gauge and 85,000 lb. of 22-gauge Galvanized Steel Roofing for the new building for the West Penn Steel Company, Brackenridge, Pa., and it is expected that some record prices will be made on this inquiry, which is the largest that has come in this market for some time. The general demand for Black and Galvanized Sheets is dull, and not more than 50 per cent. of the Sheet capacity is active at present. Some concerns that make specialties, such as electrical Sheets and Sheets for deep stamping, are running quite full, while those making only a general line are operating to but 50 per cent. or less of capacity. Prices continue to be shaded; but, as a rule, this does not amount to more than about \$2 a ton.

**Tin Plate.**—The new demand is light, and only for small lots to sort up stocks, but specifications against contracts are coming in quite freely, and the Tin Plate mills generally are fairly busy. The American Sheet & Tin Plate Company is operating close to 70 per cent. of capacity, while several other concerns are running nearly full. The Standard Tin Plate Company, Canonsburg, Pa., will add four hot mills to its plant, but reports that the McKeesport Tin Plate Company, at McKeesport, Pa., would add five hot mills to its plant are untrue. Regular prices, which do not represent minimum of the market in all cases, are as follows: \$3.70 for 100-lb. Cokes, 14 x 20, f.o.b. Pittsburgh, terms 30 days, less 2 per cent. off for cash in 10 days, this price being subject to the usual rebate of 5c. per base box in large lots.

**Bars.**—Little new business is being booked by the mills, but specifications against contracts, especially on Steel Bars, are coming in at a fairly satisfactory rate. Reports are that new orders this month show a falling off as compared with the same period in January, which was also a very dull month. Reports are that regular prices on Iron Bars are not being maintained and which are as follows: Iron Bars, 1.42c., Pittsburgh, for Western shipment, or 1.60c., Chicago, while the price for delivery in the Pittsburgh District is 1.50c. Iron Bars rolled from strictly Muck Bar stock, such as Zug, Lockhart and a few others, are held at about 1.90c., at mill. Steel Bars are firm, at 1.40c., Pittsburgh, for base sizes.

**Hoops and Bands.**—Practically no new orders are being placed, the trade being apprehensive of lower prices. Regular prices are as follows: Steel Hoops, 1.80c., base, full Hoop card prices; Steel Bands, 1.40c., base, half Steel card extra, all f.o.b. cars, Pittsburgh, in carload lots, for delivery during 1909.

**Railroad Spikes.**—The Baltimore & Ohio Railroad has placed orders for about 30,000 kegs of Railroad Spikes, divided among three or four makers, and also a large tonnage in Splice Bars. The New York Central is said to be in the market with a large inquiry for Spikes and Fish Plates. Inquiries from the railroads are better than for some time. We quote: Standard sizes, 4½ x 9-18 in., at \$1.70, and the smaller sizes at \$1.80 per 100 lb., in carload and larger lots, with an advance of 5c. per 100 lb. for less than carload, f.o.b. Pittsburgh.

**Merchant Steel.**—The new demand from jobbers and consumers is very light, and only in small lots for actual needs, while specifications against contracts are falling off in volume, the trade evidently being apprehensive of lower values in the near future. Shafting is being ordered in small lots, but specifications against contracts are coming in at a satisfactory rate. Regular discounts on Shafting are 57 per cent. off in carloads, and 52 in less than carloads, delivered in base territory, but in some cases the carload discount is shaded.

**Merchant Pipe.**—Orders placed are mostly for small lots for actual needs. A local oil company is reported to be in the market for about 30 miles of 6-in. Pipe, plain ends, and 6¼-in. Casing, for shipment to Texas. It is stated that prices on both Iron and Steel Pipe are being maintained on

a stronger basis than probably on any other finished line. It is believed that the demand for line Pipe this year will be very active, as numerous large projects are under way that will require a very heavy tonnage if put through.

**Boiler Tubes.**—There is only a very light demand for both Locomotive and Merchant Tubes, and regular discounts are being materially shaded on the small amount of new business that is being placed.

**Iron and Steel Scrap.**—The market is almost stagnant as far as new contracts for Scrap are concerned, consumers evidently believing that prices will be lower. Most large consumers of Scrap are not operating their plants to more than 50 or 60 per cent. of capacity, and this of course is keeping down the consumption very materially. Prices asked by dealers are about the same as last week, and are as follows, per gross ton, f.o.b. Pittsburgh: Heavy Steel Scrap, \$15.50 to \$15.75; Cast Iron Borings, \$9.25 to \$9.50; Bundled Sheet Scrap, \$13 to \$13.25; No. 1 Busheling Scrap, \$13.50 to \$13.75; No. 2, \$9.50; No. 1 Railroad Wrought, \$16 to \$16.25; No. 1 Cast, \$14.25 to \$14.50; Iron Axles, \$22 to \$22.25; Sheet Bar Crop Ends, \$17 to \$17.25; Low Phosphorus Melting Stock, 0.04 and under, \$18; Rerolling Rails, delivered, Cambridge, Ohio, \$17, and delivered, Cumberland, Md., \$17.50; Steel Axles, \$18; Grate Bars, \$11.25 to \$11.50; Old Car Wheels, \$16 to \$16.25; Machine Shop Turnings, \$11.25 to \$11.50; Railroad Malleable Scrap, \$14; Iron Rails, \$17.50 to \$17.75; Locomotive Tires, \$16 to \$16.25.

**Coke.**—Efforts of the Coke makers to maintain the price of standard Furnace Coke for prompt shipment at \$1.75 per net ton at oven have been abandoned, and the other expedient of cutting down output will now be tried. Last week the Bessemer Coke Company shut down 100 ovens at its Humphreys Works, and we are advised that this week from 400 to 500 ovens in the Mt. Pleasant District will be shut down. The output for some time has been much heavier than the demand. We quote standard Connellsville Furnace Coke for prompt shipment at \$1.60 at oven, but are advised that as low as \$1.50 has been done on some grades. Standard grades of 72-hr. Foundry Coke for prompt delivery are offered at \$1.90 to \$2 at oven, while on contracts extending over the next six months, \$2.25 at oven is being generally quoted. We can note one contract involving a fairly large tonnage of standard Gray Foundry Coke for delivery over the next six months at that price.

## San Francisco.

SAN FRANCISCO, CAL., February 10, 1909.

Business has been very quiet for the last two weeks, Structural Material and Steel Bars for concrete work being the only articles that have shown any activity. The quietness in other departments is attributed partly to weather conditions, which have continued unfavorable since the first of the year, preventing outside work and greatly interfering with the transportation of materials to points outside of the larger cities. Rail communication with Los Angeles was cut off last week, and has just been resumed. There was also another interruption of the railroad service to the North. This condition has prevented any movement of Pipe or other supplies to the oil fields, and the impossibility of carrying out installation plans has reduced inquiries for Merchant Pipe to a minimum. Mining machinery has been quiet for the same reason. New inquiries, however, are coming out for sawmill equipment and logging supplies, and a moderate movement is reported in this department. Some fair orders for Rails for logging roads are expected in the near future. None of the larger prospective orders for Rails have yet been closed, but several of the new railroad projects have secured financial backing, which will enable them to make purchases within a short time.

**Structural Material.**—The total of building contracts for January showed a decrease of about \$100,000 from December, but more than half of the falling off was in wooden construction, leaving an increase of nearly \$500,000 in permanent work, most of which required some Steel. New plans are still being announced, and several of them will be placed in the hands of the contractors before the end of the month. While a large proportion of the work on hand calls for only small amounts of Steel, many jobs requiring 100 tons or less, the total movement is larger than it has been for some time. The largest contract recently reported is for the Y. M. C. A. Building, which will require about 1500 tons, to be fabricated by Dyer Bros. Figures are to be taken February 25 on Pier 34, for which a considerable tonnage of Bethlehem Shapes is specified, and the contract will probably go to a local fabricator. The Pacific Rolling Mill Company has taken an additional contract for 800 tons for Southern Pacific bridge work at Dumbarton, which is being rushed to completion. Milliken Bros. have been awarded contracts for the Dale Hotel, 275 tons, and a building for Geo. Fritch, 150 tons. A contract for 500 tons for the Marquis Building is said to have been let to an Eastern fabricator. Figures are being taken this week on Kohler & Chase's Building, which will require about 400 tons. The Scottish Rite Cathedral, which will require about 1500 tons,



is now being figured on, and an inquiry for 150 tons for a City Hall at Sacramento will come up next week. Plans have been announced for a six-story structure for W. & J. Sloane, to be completed by July 1. The Smith-Rice Company has taken a small contract for a building for Rudolph Spreckels, on Market street, near Third. Figures are being taken on a five-story building for Newman & Levinson, which will cost about \$200,000. Specifications are nearly ready for a nine-story building for the Mechanics' Institute. Plans for the new Hall of Justice are nearly ready. It will be five stories high, covering a lot 137 x 160 ft. The Ralston Iron Works has taken a contract for a small building. Plans for St. Luke's Episcopal Church call for Steel frame work, but the tonnage will be small. It is announced that the Southern Pacific will soon build a double track bridge over the American River at Sacramento, to replace the single track bridge washed out by the recent flood, but the character of the work has not been stated. While no stock of imported Structural Shapes is carried in stock at San Francisco at present, the statement is made in some quarters that a considerable tonnage is arriving. The leading importers, however, assert that there is none of any consequence in transit, and arrivals of late have been very small. It is likely, however, that a limited amount of imported material will continue to be used by local fabricators, as the freight from Europe is only about a third of the Rail rate from the East. There is no European competition on fabricated material.

**Pig Iron.**—The local melters are preparing for a period of considerable activity within the next six months, but at the moment business is in about the same condition as at last report. The foundries are busier than last year, particularly on building work, but the absence of new business in other lines, due to the continued rain, is beginning to be felt. Two shipments of Pig Iron from Europe, comprising several thousand tons, have arrived this month, and this addition to the overstock already on the market does not tend to improve matters. The buying on the part of small melters has fallen off slightly, as their requirements at the moment are less than they anticipated, and the larger foundries are unwilling to take on a further surplus except at inside quotations. Importers have great difficulty in disposing of cargoes to arrive, and few contracts are being made for future delivery. Prices are weak and very irregular, and while the range may be stated at \$22 to \$25 for ordinary grades, no definite quotations can be given. There is practically no movement of Eastern Pig Iron on this Coast at present.

**Cast Iron Pipe.**—Specifications for the local salt water system have not yet appeared, but are expected before the end of the week. Aside from this, the market at the moment presents little of interest, inquiries being limited to a few carloads for small interior waterworks. The United States Pipe Company has taken an order for a small tonnage from Sacramento. The town of Dinuba is in the market, but has not decided between Steel and Cast Iron. Arrangements are being made for a new water supply for Victoria, B. C., the plan including the installation of a pipe line to cost \$1,200,000, by the Canadian Agency. The cost of the immediate work to be done on the Oakland salt water system is estimated at \$54,500. The plans were filed last week. The town of Santa Clara is in the market for a lot of special Cast Iron Fittings and Valves. Bistee, Ariz., is also inquiring for a small tonnage of Cast Iron Pipe and Fittings. The outlook for Cast Iron Pipe on the Coast is promising for the remainder of the year, as there is a marked tendency in the smaller cities of the Coast to use this material for waterworks in preference to wood or Steel. It has already been adopted to the exclusion of other materials by all cities of 25,000 inhabitants or over, and by practically all the water companies throughout the territory, and is being specified in nearly all cases where old systems are to be extended or replaced. Somewhat higher prices are being quoted, as follows: 4-in., \$37; 6 to 10 in., \$36; over 10-in., \$35.50, and \$1 extra for Gas Pipe.

**Merchant Pipe.**—The market on Merchant Pipe has been almost at a standstill since the end of January, no inquiries of any consequence being received from any quarter. This has been due in part to the unfavorable weather, which has kept the jobbing trade down to a minimum, most of the business being confined to San Francisco and vicinity. The jobbers are ordering virtually nothing, preferring to follow a waiting policy until the outlook becomes more assured. While their stocks are more or less depleted, they are able to satisfy the current demand without difficulty, and are content to rely on prompt deliveries from the manufacturers to take care of any large orders that may be received within the next few months. A project is being started by Los Angeles parties, headed by R. E. McCauley, to supply the Kern County oil fields with water from the mountains, 40 miles distant, the cost of the line being estimated at \$350,000. Lassen County, California, is in the market for 4000 ft. of ¾-in. Black Pipe, 1000 ft. of 1-in., and the same amounts of Galvanized. The city of Los Angeles has also ordered a small tonnage of Merchant Pipe.

**Old Material.**—The local Scrap market is of more in-

terest than for many months. The movement of Cast Scrap up to the end of the year was very gradual, but for several weeks the melters have been in the market in anticipation of large requirements later in the year. There has accordingly been a decided movement, cleaning up about all that was left in the hands of small dealers, and leaving only a limited stock in the hands of larger firms, who are holding for advanced prices. Heavy Cast Iron Scrap is now quoted at \$18, and purchases are being freely made at this figure for future delivery, as further advances are looked for. There is still a large amount of Cast Iron in the ruins of the city hall, which are now being wrecked, but the tonnage is less than has been estimated, as several lots were removed the past year. The old Structural Material in the city hall dome is in the hands of a large manufacturer, and will not be placed on the market. There are still about 25,000 tons of Wrought Iron and Steel Scrap in the yards here, but the largest holder is now shipping a cargo of 5000 tons to the East, and the remainder will probably be moved in the same direction as rapidly as possible. There is little market for this material here, and not over \$10 to \$12 can be realized for it.

The second annual banquet of the California Metal Trades Association was held on the evening of January 30. Geo. J. Henry, Jr., of the Pelton Water Wheel Company, was toastmaster, and the principal addresses were made by J. M. Robinson, Keystone Boiler Works; Rev. E. E. Baker of Oakland; D. H. Connick of the Board of Public Works, and James W. Kerr of the Steiger & Kerr Stove & Foundry Company.

The car shops of the Portland Railway, Light & Power Company in Portland, Ore., were damaged by fire to the extent of \$25,000 on February 9. Considerable woodworking machinery was destroyed, but the rolling stock and machine shops were saved.

The H. C. Macaulay Foundry Company is planning the expenditure of about \$10,000 in additions to its plant in West Berkeley.

J. B. Harding is now in the East to make final arrangements for the completion of the Pacific Malleable Iron Castings Company at Riverside, Cal.

The Rudgear-Merle Company, a large manufacturer of metal beds, has decided to establish a finishing plant at Portland, Ore.

The Wright Wire Company has moved its San Francisco office to First street, near Market.

The Hunters Point drydocks, recently purchased for the Bethlehem Steel Company, will hereafter be operated under the name of the Union Iron Works Drydock Company. The company was incorporated about the first of the month, with a capital stock of \$2,000,000, the directors being John A. McGregor, president of the Union Iron Works, Arnold Foster, J. H. Congdon, J. J. Tynan and M. S. Wilson.

The Risdon Iron Works has taken a contract for repairs to the steamer Admiral Sampson, for \$64,850.

Bryant S. Drake, formerly instructor in chemistry at the University of California, has been placed in charge of the chemical department of the Union Iron Works.

Nearly a dozen orders have been placed recently for gold dredgers to operate in Alaska.

The Byron Jackson Iron Works has taken a large contract for pumps to be used in reclamation work in the Southwest. The plans call for several turbine pumps 60-in. in diameter, with a capacity of 100,000 gal. per minute, each set to cost about \$15,000, and to be ready for delivery within three months.

## Philadelphia.

PHILADELPHIA, PA., February 16, 1909.

Extremely quiet conditions continue. While the market is not strong, there have been no further concessions in prices. Producers of Pig Iron are shipping freely, which would indicate that consumption is at least on an even basis. Some further inquiries for Steel cars are reported on the part of the railroads. In a general way, however, railroad buying continues very light.

**Pig Iron.**—The market is dull and listless. Sellers appear to be taking but little interest as far as Iron for forward delivery is concerned, such business as has been transacted being largely for moderate spot lots. Furnaces report consumers as taking deliveries freely, and in a number of cases more Iron is being shipped than produced. As a result, stocks on hand in this territory continue low. Some furnaces are still pretty well sold up for the next 30 and 60 days and make no particular effort to sell for shipment beyond that period, as it has been pretty well established that buyers will take nothing for forward delivery at current prices under existing conditions. As the situation stands to-day, prices, it is contended, can scarcely advance in the near future, and prospective buyers hold off in hopes of possible lower figures later on. As a result of this the

market drifts aimlessly along, both buyer and seller alike awaiting developments. Sales during the week have been comparatively small and mostly in the Foundry grades. Prices show practically no change, but the market has in no way been seriously tested. Standard No. 2 X Foundry for prompt shipment commands \$17 to \$17.25, delivered, but it is understood that these prices have been shaded by interests outside the immediate territory. A trifle more business has been done in Virginia Foundry grades, although but little has been for delivery in this territory. Southern Foundry is quiet. Producers appear to be maintaining the \$13, Birmingham, basis for No. 2, while resale Iron is offered at a \$12.75 basis, and this has been shaded for small spot lots. With the exception of a sale of 1000 tons of Forge Iron for early shipment at \$16, delivered, transactions in that grade have been practically at a standstill. No movement has been shown in Steel making Irons. Melters are not in the market, and quotations in the absence of sales are nominally unchanged. For delivery in buyers' yards, eastern Pennsylvania and nearby territory, the following range of prices is named for standard brands:

Eastern Pennsylvania, No. 2 X Foundry.....	\$17.00 to \$17.25
Eastern Pennsylvania, No. 2 Plain.....	16.50 to 16.75
Virginia, No. 2 X Foundry.....	17.25 to 17.50
Virginia, No. 2 Plain.....	16.75 to 17.25
Gray Forge.....	16.00 to 16.25
Basic.....	16.75 to 17.00
Low Phosphorus.....	21.50 to 21.75

**Ferromanganese.**—Further sales at figures close to the low price named last week are reported. Two lots of 1000 tons each have been taken by Eastern Steel makers at close to \$42, Baltimore, for delivery during the second and third quarters and last half of the year. Several small lots for early delivery were also disposed of at pretty close to the same figure. Quotations are now a trifle stiffer, and \$42 to \$43.50, Baltimore, is named, depending on delivery.

**Billets.**—No change is to be noted in the demand. Forging Steel is in somewhat better demand than Rolling Steel, but on the whole business is small and almost entirely of a prompt nature. Mills are hardly as active and stocks show some accumulation. For delivery in this territory Rolling Billets are quoted at \$26.20, with Forging Billets, \$28.20, subject to the usual extras for high carbons and special sizes.

**Plates.**—The demand continues of an irregular nature. New business is confined to small lots, as buyers will not contract for anticipated requirements owing to the uncertainty regarding prices. Some concessions are reported, but transactions in such cases are carefully covered. The leading mills continue to maintain established quotations.

**Structural Material.**—The Union League contract, covering some 1200 tons, is expected to be placed in the next few days. Some shipyard work is also under consideration, but the various other building propositions recently referred to are still being held in abeyance. The bulk of the business placed during the week has been of a miscellaneous character, mills making no particular gain in tonnage. Prices on Shapes are being maintained, but fabricated work is being taken on a small margin of profit.

**Sheets.**—Mills in this territory continue to operate on a fairly even basis. Business, however, continues irregular, and there is but little booked ahead, orders being almost entirely of a prompt nature. Prices continue unchanged.

**Bars.**—The demand is small and prices are weaker. Common Iron Bars have been quoted as low as 1.30c., at Eastern mill, while Refined Iron Bars may be had down to 1.40c., at Eastern mill. The bulk of the business placed, however, is small and for prompt shipment. For delivery in this vicinity Refined Iron Bars are quoted at 1.47c. to 1.55c.; Steel Bars, 1.55c., and Re-rolled Bars, 1.50c.

**Old Material.**—The market is practically at a standstill. Melters have pretty well covered their immediate requirements and are out of the market. Sellers are not pressing and both sides await further development. One sale of a moderate quantity of Heavy Melting Steel is reported at \$15.75 delivered, subject to rigid inspection. Small sales of Borings and Turnings are reported at slightly lower figures than last quoted. In many grades, however, not enough business has been done to establish quotations, which for delivery in buyers' yards, eastern Pennsylvania and nearby points, are nominally as follows:

No. 1 Steel Scrap and Crops.....	\$15.50 to \$16.00
Low Phosphorus.....	19.50 to 20.00
Old Steel Axles.....	20.50 to 21.00
Old Iron Axles.....	22.00 to 22.50
Old Iron Rails.....	19.00 to 19.50
Old Car Wheels.....	15.50 to 16.00
Choice No. 1 R. R. Wrought.....	17.50 to 18.00
Machinery Cast.....	15.00 to 15.50
Railroad Malleable.....	15.00 to 15.50
Wrought Iron Pipe.....	15.00 to 15.50
No. 1 Forge Fire Scrap.....	13.75 to 14.25
No. 2 Light Iron.....	9.00 to 9.50
Wrought Turnings.....	11.50 to 12.00
Stove Plate.....	12.25 to 12.75
Cast Borings.....	10.50 to 11.00
Grate Bars.....	13.25 to 13.75

**Coke.**—Little business of importance has been transacted. Some moderate sales of standard brands of Foundry

Coke have been made at \$2.25, at oven, but prices range down to \$2. Furnace Coke is dull; \$1.50 to \$1.65, at oven, represents ruling quotations; but consumers have covered pretty fully and little tonnage has been taken. For delivery in this territory, the following quotations rule:

Connellsville Furnace Coke.....	\$3.75 to \$3.90
Foundry Coke.....	4.25 to 4.50
Mountain Furnace Coke.....	3.35 to 3.50
Foundry Coke.....	3.85 to 4.10

## Cincinnati.

CINCINNATI, OHIO, February 17, 1909.—(By Telegraph.)

Only in certain machinery and tool manufacturing lines is there any activity, and this is only comparative, for the best records are short of the average normal conditions. In the crude material markets each succeeding day brings more speculation as to what the larger furnace interests are going to do to meet the waiting and nonbuying consumer, who is evidencing no interest at all at present prices. The Old Material dealers are resting and waiting, and are for the first time indicating a disposition to unload some of their heavy stocks at considerably reduced prices.

**Pig Iron.**—Agents are in a quandary. They find sales of Southern Iron being made at \$12.50, Birmingham, for No. 2, which, when carefully traced, seem to be entirely resale in character and not authorized by any furnace. On the other hand, Northern furnaces seem to be disposed to push matters a little to enliven a dull market, and \$15, at furnace, is heard as having been offered on No. 2 Foundry for immediate shipment. The declining prices in the valleys, too, have had an effect of weakening southern Ohio Irons, for at some points the Eastern Iron is a strong competitor. A considerable portion of the speculative Iron held by Scrap dealers has been disposed of, although an interest which owns between 5000 and 10,000 tons has decided to hold it for higher prices, its best price being \$12.75, Birmingham, which has not proved attractive to consumers. One agency reports a sale of this Iron at \$12.90, Birmingham. Sales for the week have been of carload lots principally, the largest from one of the representative agencies being for 500 tons of off Iron to an Indiana consumer. A sale of 50 per cent. Ferro-silicon was made at about \$62, Cincinnati. The only inquiries of the week so far are one for about 200 tons of Nos. 2 and 3 Foundry and analysis Iron for spot shipment from one of the largest stove manufacturing interests, one whose inquiries hitherto have always run into the thousands of tons. Another is for an indefinite quantity of analysis Foundry Iron, Northern specified, running in silicon 3 and over; sulphur, 0.04 and under; phosphorus, not over 0.75, and manganese, 0.50 or over. This comes from a prominent central Ohio car manufacturing concern, which was in the market recently for a good sized tonnage, and only partially satisfied its wants. Nothing is heard of Basic. High silicons remain firm on the basis of \$18.50 for 8 per cent. For balance of the first half and for immediate delivery we quote, including freight from Birmingham, \$3.25, and from Hanging Rock District, \$1.20, delivered, Cincinnati, as follows:

Southern Coke, No. 1.....	\$17.00
Southern Coke, No. 2.....	16.25
Southern Coke, No. 3.....	15.75
Southern Coke, No. 4.....	15.25
Southern Coke, No. 1 Soft.....	16.75
Southern Coke, No. 2 Soft.....	16.25
Southern Coke, Gray Forge.....	14.75
Southern Mottled.....	14.50
Ohio Silvery, 8 per cent. Silicon.....	19.70
Lake Superior Coke, No. 1.....	\$16.95 to 17.20
Lake Superior Coke, No. 2.....	16.45 to 16.70
Lake Superior Coke, No. 3.....	15.95 to 16.20
Standard Southern Car Wheel.....	22.25 to 23.25
Lake Superior Car Wheel.....	21.75 to 22.75

(By Mail.)

**Coke.**—The market appears decidedly weak, but the larger dealers deny the widely printed statement that Connellsville standard Furnace grades are obtainable at \$1.55 and \$1.60, at oven, maintaining that \$1.75 is the best that can be done on such brands for spot shipment. The ruling price for forward deliveries is \$1.85 to \$2, and for spot Foundry \$2 to \$2.25; on contract \$2.15 to \$2.35. Inquiry has reached the minimum on Foundry Coke, and the immediate future does not look promising.

**Bars.**—Dealers last week experienced a little activity in Bars, small shipments, the demand coming largely from repair shops, whose stocks have been allowed to run low. The asking price on small lots is 1.85c., but if desirable specifications come up the price is probably shaded.

**Other Rolled Products.**—Constructing engineers and contractors generally report a dearth of inquiries, and some large deals which were scheduled to come out in the early spring are now expected to be held up indefinitely. The architects, Samuel Hannaford's Sons, will be ready for bids on the construction of the Ohio Mechanics' Institute Building late in March. As a rule, Rolled Products are not claiming enough attention to make a reliable market.

**Old Material.**—Dealers all agree this week that the market is lifeless, and prices are again off. All the large



railroads in central territory are reported to have good sized lists out, but buyer and seller are far apart on prices, and the large local dealers affirm that unless the railroads revise their ideas considerably little business will result. Consumers are holding back with such little buying as is in sight, believing that the trend is further downward, and that February will close with still further reductions. Dealers' prices, carefully revised, are about as follows, f.o.b. Cincinnati:

No. 1 R. R. Wrought, net ton.....	\$13.00 to \$13.50
Cast Borings, net ton.....	6.50 to 7.00
Heavy Melting Steel Scrap, gross ton..	13.75 to 14.00
Steel Turnings, net ton.....	7.50 to 8.00
No. 1 Cast Scrap, net ton.....	12.50 to 13.00
Burnt Cast, net ton.....	9.00 to 9.50
Old Iron Axles, net ton.....	18.00 to 18.50
Old Iron Rails, gross ton.....	16.50 to 17.00
Old Steel Rails, short, gross ton.....	14.50 to 15.00
Old Steel Rails, long, gross ton.....	14.50 to 15.00
Relaying Rails, 56 lb. and up, gross ton	21.50 to 22.00
Old Car Wheels, gross ton.....	15.50 to 16.00
Low Phosphorus Scrap, gross ton.....	14.00 to 14.50

## Cleveland.

CLEVELAND, OHIO, February 16, 1909.

**Iron Ore.**—The movement from docks to furnace yards continues light. Only one or two merchant dealers report that their shipments are heavier than during February of last year. There are no inquiries for Ore, and the present rate of consumption, together with the unsettled conditions in the Iron and Steel trade and the probability of tariff revision, leads to the belief that the buying movement this season will start very late. Prices at Lake Erie docks, per gross ton, are as follows: Old Range Bessemer, \$4.50; Mesaba Bessemer, \$4.25; Old Range Non-Bessemer, \$3.70; Mesaba Non-Bessemer, \$3.50.

**Coke.**—There seems to be no decrease in the quantity of spot Coke that is being offered, and prices continue weak. An inquiry is out from an Ohio Pipe maker for about 5000 tons of Foundry Coke for delivery through the balance of the year. We quote Standard Connellsville Furnace Coke at \$1.50 to \$1.60, at oven, for spot shipment, and \$1.80 to \$1.90 on contract. Connellsville 72-hr. Foundry Coke is held at \$2 to \$2.25, at oven, for spot shipment, and \$2.25 to \$2.40 on contract.

**Pig Iron.**—The market is almost lifeless. The only sales reported are a few small lots of Foundry and Malleable by a local interest at an Ohio furnace for second quarter delivery. These sales aggregate about 800 tons. The only new inquiries are two or three for lots of Foundry Iron ranging from 100 to 300 tons. A local furnace has rejected an offer of \$15, at furnace, for 300 tons of No. 2 Foundry for last half delivery. Cleveland furnaces are shipping out on contract all the Iron they are making, but less encouraging reports are made by local interests that operate furnaces in other territories. Some Iron is being piled by these furnaces, and consumers are slow in taking shipments, the melt apparently having fallen off somewhat as compared with a month ago. In this territory foundries making light castings are fairly busy, but those making heavy castings have little work on hand, and unless conditions improve materially some consumers will not use up until well along in the third quarter Iron they bought for the first half delivery. Owing to the light demand the starting up of two blast furnaces, which were to have been blown in about March 1, will probably be postponed. The market continues weak and desirable orders would doubtless bring out low price quotations. For the first quarter and first half we quote, delivered, Cleveland, as follows:

Bessemer.....	\$16.90
Northern Foundry, No. 1.....	\$16.75 to 17.00
Northern Foundry, No. 2.....	16.15 to 16.50
Northern Foundry, No. 3.....	15.75 to 16.00
Gray Forge.....	14.75 to 15.00
Southern Foundry, No. 2.....	17.35
Jackson County Silvery, 8 per cent. Silicon....	20.05

**Finished Iron and Steel.**—Specifications are holding up fairly well with the leading interest, the tonnage ordered being about the same as during the previous few weeks, but the majority of the mill agents report a slight falling off in orders. In view of the uncertainty of the maintenance of present prices, consumers are ordering only in small lots for their immediate needs, and salesmen are advising their customers not to stock up. Owing to the price situation, bridge and structural shops which usually place large stock orders at this time of the year are withholding these orders. Jobbers are also holding back, ordering only such material as is absolutely needed to replenish their warehouse stocks. The new Ore handling plant to be erected in Cleveland by Corrigan, McKinney & Co., for which contracts were let during the week, will require about 600 tons of Plates, Shapes and Bars. The contract for about half of this tonnage has been placed. The dock to be erected by the same company in connection with its new blast furnace will require about 500 tons of Staybolts. A local Plate mill reports considerable improvement in orders for Boiler Plates, boiler makers in this territory now being fairly busy. There are now reports of concessions on Steel Bars to the extent of \$1 a ton, the price

of which has been firmly maintained in this territory up to the present time. Local Bar Iron mills continue to get enough small orders to keep running, prices are being shaded \$1 a ton. Price shading on Plates is more general, concessions of \$1 to \$2 a ton being made on wide sizes as well as the narrow sizes. The demand for Sheets is light, and concessions of \$2 a ton are being made. The buying of small lots for immediate needs has stimulated warehouse business, jobbers reporting that their orders show considerable increase over January.

**Old Material.**—The demand shows no improvement. Local mills are fairly well supplied, and sales are mostly car lots for immediate needs. Dealers who were forced to dispose of at least a portion of their stocks at what they could get have done so and little Scrap is being offered at present prices. Dealers who have been holding their Scrap for two or three months for an advance are hopeful of better prices before long and will not sell at present quotations, although they admit that the outlook is not very encouraging. Prices appear to be slightly weaker, but quotations are unchanged. Dealers' prices, f.o.b. Cleveland, are as follows:

Old Steel Rails.....	\$15.00 to \$15.50
Old Iron Rails.....	18.50 to 19.00
Steel Car Axles.....	19.00 to 19.50
Old Car Wheels.....	14.50 to 15.00
Heavy Melting Steel.....	14.25 to 14.75
Relaying Rails, 50 lb. and over.....	21.50 to 22.50
Agricultural Malleable.....	12.50 to 13.00
Railroad Malleable.....	14.00 to 14.50
Light Bundled Sheet Scrap.....	9.00 to 9.50

The following prices are per net ton, f.o.b. Cleveland:

Iron Car Axles.....	\$19.50 to \$20.00
Cast Borings.....	8.00 to 8.50
Iron and Steel Turnings and Drillings.....	9.00 to 9.50
Steel Axle Turnings.....	10.50 to 11.00
No. 1 Busheling.....	12.25 to 12.75
No. 1 Railroad Wrought.....	15.00 to 15.50
No. 1 Cast.....	13.50 to 14.00
Stove Plate.....	11.50 to 12.00
Bundled Tin Scrap.....	9.00

## Birmingham.

BIRMINGHAM, ALA., February 15, 1909.

**Pig Iron.**—The status of this market is practically the same as at the time of last report. Producing interests without exception adhere to quotations on a basis of \$13, Birmingham, for No. 2 Foundry, and the small lots engaged during the past week were so distributed among the various interests as to indicate a uniform asking price. As to what concession could be had by a firm offer for a round tonnage involving the higher grades, the nature of the demand is such that a definite statement is not warranted. It is currently rumored that at least one producing interest would accept an order for a round tonnage at figures close to \$12.50, Birmingham, for No. 2, but the only recent offerings of consequence have involved such grades as not to be considered a test of values. The latest significant offering was 1000 tons of especial analysis Iron. This order was available at a price equal to \$12.50, Birmingham, for No. 2, and was not placed by reason of the prospective purchaser's inability to secure those figures. Comparatively small lots of a favorite brand of No. 2 recently brought \$13, and high manganese Iron has sold at \$13.50 per ton in carload lots for spot shipment. The aggregate of engagements during the past week is placed roughly at 1500 to 2000 tons, which is for early shipment. A portion of this represents resale Iron, although indications favor but a slight variance in price considerations. The requests that shipment against contracts be withheld are numerous, and in some cases stock accumulations on furnace yards are increasing, yet the resumption of operations at one or more local foundries now idle is scheduled for the coming week, and a normal consumption by Pipe manufacturers at an early date is indicated.

**Cast Iron Pipe.**—It is learned that the United States Cast Iron Pipe & Foundry Company was the successful bidder on 8700 tons of Water Pipe placed by Kansas City, Mo., February 11, and that a significant portion of the order will be furnished from the plant here. The Dimmick Pipe Company of this city was recently awarded approximately 6000 tons of Gas Pipe for use at Kansas City, Mo.; Sioux City, Iowa, and Omaha, Neb. This company is also credited with an attractive tonnage of Water Pipe for the city of New Ulm, Minn. The movement from all Southern plants just at this time is very satisfactory, and the aggregate tonnage being withheld pending satisfactory disposition of municipal bonds is of consequence. There is no authorized change in quotations, and we quote, as follows, for Water Pipe, per net ton, f.o.b. cars here, which prices are probably shaded on large municipal contracts: 4 to 6 in., \$26; 8 to 12 in., \$25; over 12-in., average \$24, with \$1 per ton extra for Gas Pipe.

**Old Material.**—Following the unsteadiness of the Pig Iron market, prices of this material are inclined to weaken and the movement from dealers' yards shows but little improvement. The reorganization of the Southern Steel Com-

pany, formerly the largest consumer in this district, is the only encouraging feature in the outlook at present. We quote dealers' asking prices as follows, per gross ton, f.o.b. cars here:

Old Iron Rails.....	\$14.50 to \$15.00
Old Iron Axles.....	15.50 to 16.50
Old Steel Axles.....	13.00 to 13.50
No. 1 Railroad Wrought.....	13.00 to 13.50
No. 2 Railroad Wrought.....	11.00 to 11.50
No. 1 Country Wrought.....	10.00 to 10.50
No. 2 Country Wrought.....	9.00 to 9.50
No. 1 Steel.....	10.00 to 10.50
No. 1 Machinery.....	10.50 to 11.00
Tram Car Wheels.....	11.50 to 12.00
Standard Car Wheels.....	13.00 to 13.50
Stove Plate and Light Cast.....	8.50 to 9.00
Cast Borings.....	5.00 to 6.00

## Buffalo.

BUFFALO, N. Y., February 16, 1909.

**Pig Iron.**—While specifications on contracts are coming in in fairly liberal volume, only a small amount of new business is developing and the market is weak and dragging. Prices obtainable are not at all attractive to furnacemen. Although there has been no formal change in prices, it is probable that the minimum prices in the appended nominal schedule, f.o.b. Buffalo, would be the maximum of what could be obtained on orders of any considerable tonnage:

No. 1 X Foundry.....	\$16.50 to \$17.00
No. 2 X Foundry.....	16.00 to 16.50
No. 2 Plain.....	15.50 to 16.00
No. 3 Foundry.....	15.50 to 16.00
Gray Forge.....	15.50 to 15.75
Basic.....	16.00 to 16.50
Malleable Bessemer.....	17.00 to 17.50
Charcoal.....	20.50 to 21.00

**Old Material.**—Consumers are out of the market to a large extent, not finding attractive the slightly lower prices which dealers are willing to concede. Such business as is being transacted is among dealers and of small volume. Prices have a lower trend and have been shaded 50c. to 75c. per ton in most lines. We quote dealers' nominal prices as follows, per gross ton, f.o.b. Buffalo:

Heavy Melting Steel Scrap.....	\$14.50 to \$15.00
Low Phosphorus Steel Scrap.....	20.00 to 20.50
No. 1 Railroad Wrought.....	15.50 to 16.00
No. 1 Railroad and Machinery Cast Scrap.....	14.50 to 15.00
Old Steel Axles.....	18.50 to 19.50
Old Iron Axles.....	22.00 to 22.75
Old Car Wheels.....	15.50 to 16.00
Railroad Malleable.....	13.50 to 14.00
Boiler Plate.....	12.00 to 12.50
Locomotive Grate Bars.....	11.75 to 12.25
Pipe.....	11.75 to 12.25
Wrought Iron and Soft Steel Turnings.....	9.75 to 10.25
Clean Cast Iron Borings.....	9.00 to 9.50
No. 1 Bushing Scrap.....	14.00 to 14.50

**Finished Iron and Steel.**—The market is quiet, with inquiries running light in Bars, Rods, Small Shapes and Plates. New business consists principally of small orders, to be rushed for immediate use. Reports would indicate that there is some shading in prices of Plates, Bars and Hoops in efforts to produce increased business. In Structural Material the outlook continues favorable. The general contract for the Steel for the German Insurance Building, Rochester, about 300 tons, will be awarded this week, and bids for between 400 and 500 tons for Moore's Temple Theater, Rochester, will be received February 20. The date for receiving bids for the 1400 tons required for the Onondaga Hotel, Syracuse, has been postponed until March 10.

## New York.

NEW YORK, February 17, 1909.

**Pig Iron.**—During the past week sales have been on a limited scale. There are, however, some good inquiries in the market, one for about 8000 tons for a New England Foundry interest, and one for 12,000 tons of Forge for the year's requirements of a puddle mill. Prices are easier. We quote \$17.25 to \$17.50 for No. 1 Northern Foundry, \$16.75 to \$17.25 for No. 2 Foundry and \$16.25 to \$16.50 for No. 2 Plain. Alabama Irons are quoted \$17.25 to \$17.50 for No. 1 Foundry, and \$17 to \$17.25 for No. 2 Foundry.

**Steel Rails.**—The distribution of the New York Central Rail order has been practically decided on, and the Pittsburgh, South Chicago and Buffalo mills are expected to get a total around 85,000 tons. The Nickel Plate has bought 5000 tons from the Illinois Steel Company, which has also booked 1400 tons for the New Orleans & Northwestern, 1000 tons for the Toledo, Peoria & Western and 1225 tons for the Chicago & Oak Park Elevated. The Delaware & Hudson and the Long Island Railroad are in the market for 4000 tons each. Some sales of Manganese Steel Rails have been made by two mills in recent weeks, one having booked a total of 1500 tons, largely to be placed on subway curves. The price is \$125 a ton. Another producer quotes \$180. The life of these Rails is from 50 to 60 times that of Bessemer Rails. Some low prices on Light Rails have been made lately in a more active competition of Steel works and rerolling mills.

**Structural Material.**—The lack of railroad demand is emphasized by the statistics of new business since the opening of the year, the total of railroad bridge work let in that time being about 7000 tons, while Steel construction contracts of all kinds amounted in the same time to about 60,000 tons. The Elk street viaduct of the New York Central at Buffalo has been awarded to the Strobel Steel Construction Company, Chicago, the Steel requirements being about 2000 tons. The largest New York City contract recently figured on—the Henry Corn loft building on Fifth avenue, 3500 tons—was awarded to the Hay Foundry & Machine Company. Bids are being received on revised plans for the Fidelity & Casualty Company's addition to its building on Cedar street. At Rochester, N. Y., bids are going in this week on the Steel for the 10-story addition to the German Insurance Company building. A canvass of the building prospects in New York City gives good promise for spring work and a fairly active season is looked for, though prices are so low that the chances of profit have been very much reduced. We continue to quote 2½c. on small lots of plain material cut to length. On mill shipments the Pittsburgh basis governs, though fabricating contracts still indicate in some cases cuts of from \$5 to \$7 a ton from the official prices for Shapes.

**Ferroalloys.**—Some further business has been taken in Ferromanganese at \$43. This has been made up of carload lots. Ferrosilicon is no better, and the last quoted price of \$63, Pittsburgh, is often shaded.

**Bars.**—Business is quiet, with prices unchanged. Iron Bars of common quality are held at 1.40c. to 1.45c., tide-water, and Refined Iron Bars range from 1.45c. to 1.55c., tide-water, according to quantity, terms, &c. Steel Bars are quoted at 1.56c., tidewater.

**Plates.**—The demand is still confined to exceedingly small lots. Prices are unchanged.

**Cast Iron Pipe.**—As far as can be ascertained, no lettings of importance are up for consideration beyond those mentioned in last week's report. A Philadelphia manufacturer secured the Boston contract for about 2700 tons at \$23.30, delivered, for 3 to 12 in.; \$23 for 16 to 24 in., and \$23.60 for 30-in. The leading interest took a small quantity for Waltham, Mass., 6 to 8 in., at \$24, delivered. Carload lots of 6-in. are still nominally quoted at \$24 per net ton, tidewater.

**Old Material.**—The embargoes on Eastern mills having been raised by the railroads, deliveries of Steel Scrap are being made more freely on old orders. New business, however, is quite light. The rolling mills are buying practically nothing in Wrought Scrap, and the foundries are purchasing Cast Scrap in a decidedly limited way. The dealers are again beginning to accumulate, in the expectation that stock taken in at prices now available can be sold at a good profit a little later. The railroads have disposed of 25,000 to 30,000 tons this month, which naturally depressed the market to some extent. Old Car Wheels are now attracting attention abroad, and some export business is being done in them. While quotations are nominally unchanged on the general list, yet it is likely that any pressure to sell would result in lower prices. Quotations are as follows, New York and vicinity, per gross ton:

Old Girders and T Rails for melting.....	\$13.00 to \$13.50
Heavy Melting Steel Scrap.....	13.00 to 13.50
Relaying Rails.....	21.50 to 22.50
Old Iron Rails.....	16.00 to 16.50
Standard Hammered Iron Car Axles.....	17.00 to 17.50
Old Steel Car Axles.....	16.50 to 17.00
No. 1 Railroad Wrought.....	15.00 to 15.50
Iron Track Scrap.....	13.00 to 13.50
No. 1 Yard Wrought, long.....	14.50 to 15.00
No. 1 Yard Wrought, short.....	13.00 to 13.50
Light Iron.....	7.50 to 8.00
Cast Borings.....	7.00 to 8.00
Wrought Turnings.....	8.00 to 8.50
Wrought Pipe.....	11.00 to 12.00
Old Car Wheels.....	14.00 to 15.00
No. 1 Heavy Cast, broken up.....	13.00 to 13.50
Stove Plate.....	10.50 to 11.00
Locomotive Grate Bars.....	10.50 to 11.00
Malleable Cast.....	12.50 to 13.00

## Metal Market.

NEW YORK, February 17, 1909.

**Pig Tin.**—Business during the week continued dull, principally because of the holidays. On two days, however, Thursday and Monday, a number of fair sized lots were disposed of. Prices have moved toward higher levels, as follows:

February 10.....	Cents. 28.42½ to 28.45
February 11.....	28.50
February 15.....	28.40 to 28.42½
February 16.....	28.80
February 17.....	28.80

The marked scarcity of Tin continues to be a topic much discussed by those in the trade. Some hold the opinion that the representatives here of London interests are either working in close harmony or the London interests are endeavoring to make Tin scarce. While this has been done frequently



in the past, with varying degrees of success, it has generally been when there was a good business. In the present instance they might be left in the same predicament as was a daring operator a number of years ago, who cornered the supply of prunes; when he had them successfully cornered he found there was no market. It would seem strange that the London operators should attempt to corner Tin when the present supplies are so large and consumption is so small. In the meantime the Tin market is growing more interesting. Stocks the first of the month were about 3500 tons, and since then the arrivals have amounted to 897 tons, being probably more than deliveries outside of the leading consumer. The London market closes to-day about £1 15s. higher than last week, at £130 5s. for spot and £131 15s. for futures. There are afloat for American ports 3778 tons.

**Copper.**—Business continues quiet, and prices are even lower than last week. Domestic consumers can obtain Electrolytic at 13.12½c. to 13.25c., cash, New York. Holders of Lake ask 13.50c., but possibly this could be shaded to the extent of ¼c. Exporters can obtain it ¼c. lower, at 13.25c. The same class of buyers is able to procure Electrolytic at 13c. for shipment abroad. There has been some business placed both here and abroad during the last week; but, on the whole, it is a small tonnage. The figures submitted by the Copper Producers' Association have not created much stir in the trade. The question is often pointedly asked, if these figures are so much better than many believe why does the market continue to decline? By all odds, the chief interest was in the stocks accumulated during January, amounting to about 10,000 tons. From present indications these figures will be exceeded in the short month of February, as for the first 16 days only 7000 tons were exported and imports have been heavy. Some quarters advance the information that business is considerably better than appears on the surface. This may be so in some lines, but the Wire trade is still exceedingly dull. The price of spot Copper in London is about 15s. lower than last week, at £58 7s. 6d. Futures, however, are 5s. higher, at £59 5s.

**Lead.**—The American Smelting & Refining Company continues to quote shipment Lead in 50-ton lots at 4.10c., New York. Outside interests are offering Desilverized Lead at 4.05c., and first-class brands at that. Soft Missouri can be had at 4c. In St. Louis Lead is obtainable at 3.85c. to 3.90c., the inside price being for the Soft Missouri brands. The agitation regarding the tariff is undoubtedly having the greatest effect in the Lead market.

**Spelter.**—The price is lower, and in St. Louis 4.80c. to 4.85c. is quoted. This would indicate that it could be had in New York at 4.92½c. to 4.97½c., but these prices are more or less nominal. While a sharp buyer might be able to obtain them, they are not current quotations.

**Antimony.**—It is cheaper to buy Antimony in small lots in the United States than it is to import large lots from abroad. Cookson's is obtainable at 8.12½c., Hallett's at 8c. and outside brands at 7.87½c. to 8c.

**Aluminum.**—The market is quiet. Prices are without change at 24c. for No. 1 Ingots, 32c. for Rods and Wire and 34c. for Sheets.

**Tin Plate.**—While large consumers can obtain concessions amounting to not over 10c. per box, these are by no means general, and the bulk of the business being taken is much nearer to if not at the regular quoted prices of \$3.70, Pittsburgh, and \$3.89, New York, for 100-lb. IC Coke Plates. In Swansea Welsh Plates are unchanged at 11s. 9d.

**Old Metals.**—Business is very quiet, and the following dealers' selling prices are largely nominal, being unchanged from last week:

	Cents.
Copper, Heavy Cut and Crucible.....	13.00 to 13.25
Copper, Heavy and Wire.....	12.50 to 12.75
Copper, Light and Bottoms.....	11.50 to 11.75
Brass, Heavy.....	9.25 to 9.50
Brass, Light.....	7.50 to 8.00
Heavy Machine Composition.....	12.00 to 12.25
Clean Brass Turnings.....	8.50 to 9.00
Composition Turnings.....	10.00 to 10.50
Lead, Heavy.....	3.80 to 3.90
Lead, Tea.....	3.55 to 3.65
Zinc Scrap.....	3.65

Meetings are being held in New York this week of representatives of railroads which carry coal and coke from Pennsylvania, Ohio and West Virginia fields to Lake Erie ports, also of operators of coal mines in the respective districts. While there is a separate meeting of West Virginia operators who ship over the Chesapeake & Ohio and the Norfolk & Western on matters pertaining to the coal trade, the conferences between the railroad and mining interests have to do with the freight rates on coal to lower lake ports, the Pennsylvania and Ohio operators contending that the rate on West Virginia coal in the past year has been too low. There is also a question of the coal rates to the so-called new and old Buffalo districts. The old Buffalo District, which takes

in the territory east of Main street, Buffalo, and including all the blast furnace and steel plants except the furnaces at North Tonawanda, has a coal rate of \$1.25 from Pittsburgh. The new Buffalo District, taking in Black Rock, Tonawanda and Lockport, has a rate of \$1.30. It is proposed to equalize conditions by advancing the rate of the old Buffalo District to \$1.30.

## Iron and Industrial Stocks.

NEW YORK, February 17, 1909.

Transactions have been light and fluctuations narrow during the past week, in which business was curtailed by two holidays on the various stock exchanges. Notwithstanding the apathy in trade circles, the prices of securities of iron and industrial companies are continuing remarkably firm. The range of prices on active iron and industrial stocks from Thursday of last week to Monday of this week was as follows:

Allis-Chalm., com.. 15 - 15½	Railway Spr., pref..... 101
Allis-Chalm., pref.. 48 - 48½	Republic, com..... 24 - 24½
Beth. Steel, pref..... 51½	Republic, pref..... 85½ - 86
Can, com..... 8½ - 8½	Sloss, com..... 79½ - 79¾
Can, pref..... 74½ - 75½	Pipe, com..... 28 - 28½
Car & Fdry, com.. 50½ - 51	Pipe, pref..... 75
Car & Fdry, pref.. 111 - 111½	Steel, com..... 52½ - 53½
Colorado Fuel..... 40 - 40½	Steel, pref..... 113½ - 114½
General Electric... 156 - 158	West. Electric..... 82½ - 83½
Gr. N. ore cert.... 71 - 72½	Cambria Steel..... 37½ - 37¾
Int. Harv., com.. 65 - 66	L. S. Corp..... 17½ - 18½
Int. Harv., pref.. 111 - 112½	Penna. Steel, pref.. 103½ - 104
Locomotive, com.. 56 - 57½	Warw. I. & S. Co... 8 - 8½
Locomotive, pref.. 112	Crucible St., com..... 7½
Nat. En. & St., pref..... 82	Crucible St., pref.. 62½ - 63
Pressed Steel, com. 41½ - 42	Harb.-Walker, pref..... 84
Railway Spr., com. 46½ - 47	

Last transactions up to 1.30 p.m. to-day are reported at the following prices: United States Steel common 52½, preferred 114, bonds 104; Car & Foundry common 51, preferred 111; Locomotive common 56½, preferred 112¾; Colorado Fuel 40½; Pressed Steel common 41½, preferred 102½; Railway Spring common 47; Republic common 24½, preferred 85½; Sloss-Sheffield common 78; Cast Iron Pipe common 27½, preferred 75; Can common 8½, preferred 76.

**Hungarian Engineers and Architects Organize.**—A number of Hungarian engineers and architects pursuing their professions in this country have organized the American Society of Hungarian Engineers and Architects. The society has two objects: 1. To bring in closer touch engineers and architects of Hungarian extraction, living in this country, and to give moral support and information to newcomers. 2. To encourage the exchange of engineering, technical and industrial information between the technical men of Hungary and of the United States, and to foster technical societies, sciences and industries. The society will hold monthly meetings. Following are the officers: President, A. Henry Pikler, engineer in charge of transformer department, Crocker-Wheeler Company, Ampere, N. J.; vice-president, Karoly Z. Horvay, chief draftsman, Building Bureau of Board of Education, Brooklyn, N. Y.; secretary, Zoltan de Nemeth, New York Edison Company; treasurer, Sandor Oesterreicher, New York Edison Company; assistant secretary, Ernest L. Mandel, Bureau of Commissioner of Public Works, New York City. The society's business address is Box No. 1031, New York City.

The annual banquet of the Engineers' Society of Pittsburgh will be held in The Rittenhouse, Pittsburgh, on the evening of February 20. An attractive programme has been arranged, and an interesting feature of the occasion will be long distance telephone greetings from the presidents of the national engineering societies, special service wires being arranged for the occasion. The regular monthly meeting of the society was held on the evening of February 16, at which a paper entitled "The Manufacture of Portland Cement" was read by W. M. Kinney, inspecting engineer connected with the Universal Portland Cement Company.

The General Fireproofing Company, Youngstown, Ohio, has opened an office in the Fulton Building, Pittsburgh, in charge of W. R. Day, who represents its furniture department, and D. S. Donohue, who will look after the metal lath and concrete reinforcement departments.

## The Machinery Trade.

NEW YORK, February 17, 1909.

The demand for machinery the past week was light and irregular, with here and there a house reporting a slight betterment, but the great proportion noting no change in either the volume or character of inquiries or orders. One day a better inquiry is received, but the next day the dullness overbalances the improvement. There seems to be little stability to trade, which, it is thought, will likely continue on the present level until general business improves and the large corporations come into the market more freely. Since our last report no inquiries of importance have been received from the railroads, but inquiries from several of the Western roads for a few tools each are in hand. The Eastern railroads have not yet come into the market for machine tools. The larger proportion of business has come from the smaller industrial plants and sales covered only a tool or two each. There seems to be no buying of complete equipment for new shops or additions. Considerable new construction work has recently been announced, however, for which quite a little new mechanical equipment will likely be purchased within a short time.

The number of foreign inquiries for machine tools and special machinery in the market just now indicate that European manufacturers in some lines at least are quite busy. The automobile manufacturers of France and Italy are always buying something here, and lately there has been something of a revival in that line abroad and some substantial inquiries have come into this market, principally through the export men.

A good indication that business is better in the West than in this vicinity is the fact that many machinery representatives of the big houses, especially those in charge of the selling departments, have been paying visits to the Western trade of late. Men representing houses that make a specialty of exporting and importing machine tools are also busy in the West looking for trade in the way of orders for special equipment which can be obtained to advantage on the other side. The invasion of the Western market by heads of departments from New York does not mean that the regular Western representatives of the big companies are to be deprived of credit for business getting, but it simply indicates that affairs there are considered of enough importance to bring all possible stress to bear in landing orders by giving representatives the benefit of all the assistance and advice possible.

The following committee has been appointed by the Southern Supply & Machinery Dealers' Association as an Entertainment Committee to confer with a similar committee from the American Supply and Machinery Manufacturers' Association in arranging details for the joint convention at Chattanooga, Tenn., on May 5, 6 and 7: W. E. Mills, James Supply Company, Chattanooga, Tenn.; H. C. Clark, Charlotte Supply Company, Birmingham, Ala., and John C. Doyle, Nashville Machine Company, Nashville, Tenn. Mr. Mills will be chairman of the committee.

The plant of the Ingersoll-Rand Company at Tarrytown, N. Y., which was one of the Rand Drill Works before the amalgamation of the Rand and Ingersoll companies, has been acquired by the Maxwell-Briscoe Motor Company and will be put in operation shortly for the manufacture of automobiles. Under the arrangement made with the Ingersoll-Rand Company it is understood that part of the mechanical equipment in the plant will be taken over by the Maxwell-Briscoe Company, and the rest of the Ingersoll-Rand Company's effects are now being moved to the company's plant at Painted Post. This will mean that considerable equipment will have to be purchased by the Maxwell-Briscoe Motor Company, and it is said in the trade that later on the company will come into the market for additional machine tools. The Rand Works at Tarrytown is a large and well equipped plant. It includes a main machine shop, 60 x 200 ft., and two or three other buildings nearly as large, in addition to a power house, office structure and storage buildings. It is understood that the Maxwell-Briscoe Company will take over the power plant, as it is modern and in good condition, so probably nothing will be required in that line; but considering the fact that the plant was not built for an automobile manufactory, it is highly probable that there will be a good sized list of requirements for machine tools, especially machinery designed for automobile construction.

The International Steam Pump Company, New York, is buying against a small list of machine tools which cover, it is estimated, an expenditure of about \$12,000. It is understood that the equipment is intended for the company's plant at Harrison, N. J., and it will be used to increase the output of the meter department.

It is understood that the American Locomotive Company recently secured a good sized contract for manufacturing taxicabs, and some purchases are being made, especially in

the machine tool and special machinery line, for its plant at Providence, R. I., in order to increase its output. The company will not make any extensions to its building, from all accounts, as it has enough space under roof to admit of a substantial addition to its manufacturing department.

Announcement has been made by John W. Dunn, who recently resigned as president of the International Steam Pump Company, New York, that he is forming a company to manufacture brake shoes and other railroad specialties. It is said that the company will be started with \$1,000,000 capital and a plant will be built somewhere in New Jersey, probably in the vicinity of Newark. The company expects to build a plant large enough, it is stated, to employ eventually 6000 hands, but about half of that number will be required at first. This enterprise, it is said, has nothing to do with the project to manufacture pumps and air compressors which has been outlined in these columns.

Considerable new machinery is to be purchased by the Iowa Central Railroad for its shops at Marshalltown, Iowa, to replace the old tools now being used. The intention is to gradually install new and up to date machinery, buying one or two tools a month until the shops are entirely equipped with modern machines. Thus far only about \$1400 worth of new machinery has been purchased.

The Climax Lock & Ventilator Company, Ellicott square, Buffalo, N. Y., manufacturer of burglar proof sash locks and other hardware specialties, intends to purchase presses, lathes, screw machines, power shears and other equipment to make metal stamped specialties, amounting to from \$7000 to \$10,000. The company has decided to move its factory from Lockport to Buffalo, and arrangements are now being completed for factory premises in the latter city.

The Manitoba Iron Works, Ltd., Winnipeg, Man., intends to change its corporate name to the Manitoba Bridge & Iron Works, Ltd., and is now engaged on the preliminary work of erecting a new bridge and structural shop, 140 x 416 ft., which will be thoroughly equipped with modern machinery. T. R. Deacon, president and general manager, and J. A. Coulter, vice-president and shop superintendent, have just returned from a trip of inspection of the largest shops in America and are now preparing the plans and ordering the material for the new building. It is expected that the new shop will be ready for operation by June.

We understand that the Onondago Litholite Company, Syracuse, N. Y., will close bids about March 1 for the construction and equipment of its new plant. The main building will be 45 x 250 ft. The equipment will include cranes, derricks, stone crusher, concrete mixer, rolls, special machinery, &c., all of which will be motor driven.

The Inventors' Model Works, 551 West Forty-second street, New York, manufacturer of labor saving machinery, vacuum carpet cleaning machines, &c., has recently incorporated its business, with a capital stock of \$10,000. The company intends to take up the manufacture of other lines in the near future and will rent another floor in the building which it now occupies, for the equipment of which it will likely purchase some new machines. H. F. Herman is president; William G. Busse, vice-president, and C. G. Hill, secretary and treasurer.

A good sized order for motors has been placed with Fairbanks, Morse & Co. by Bloomingdale Brothers, Fifty-ninth street and Third avenue, New York. These motors are to be used in connection with the company's vacuum cleaning installation, and it may be added in this connection that the advent of the vacuum cleaners in large establishments throughout New York has made a substantial increase in the demand for small motors.

C. S. Wenger, consulting hydraulic engineer, Brownstown, Pa., is preparing plans for the power development of the Craig Water Power Company in Virginia. Some details of the installation have not yet been fully decided, but it is likely that Mr. Wenger will be ready to purchase the required equipment in a short time. These two power plants will be built to supply current for lighting and power purposes in Richmond, Va., which is the headquarters of the company. The Meadow Creek installation will be of about 2500 hp. capacity under an 800-ft. head, and the equipment will consist of two impulse water wheel driven units, direct connected, of 700 kw. each. The other installation, on John's Creek, near Meadow Creek, is to be made later and will furnish the same horsepower under a 225-ft. head. The equipment will be probably a duplicate of the first installation. The Craig Water Power Company was organized last October, with a capital stock of \$200,000. A. L. Sibert is president; Louis A. Scholz, vice-president, and Henry Scholz, secretary and treasurer.

What is hoped to be the final chapter in the series of delays connected with the project to construct a trolley road through towns in Westchester County to connect with the subway system in New York, was enacted on February 15 when the Up-State Public Service Commission gave the New York, Westchester & Boston Railroad authority to go ahead with the construction of its line. It will be remembered that the New York, New Haven & Hartford Railroad took over the New York, Westchester & Boston Railroad after that railroad had merged with an opposition company. All these



negotiations took time, and for the last three years or more the trade has been waiting and expecting business from this source. At one time the engineers in charge issued inquiries for equipment for a large power house and had preliminary inquiries out for a machine shop, and some companies who were informed that they had bid low saw the business within their reach, only to learn that property owners had protested against condemnation proceedings brought by the railroad company to secure rights of way, and that entailed further legal proceedings. These protests of the property owners were dismissed by the Up-State Public Service Commission last week, and once again it looks as though the business may be placed.

The Hudson & Manhattan Railroad, which now has tunnels in operation under the Hudson River from Hoboken to New York, and whose tunnel to Jersey City from the foot of Cortlandt street will be in operation next summer, has made application to the Public Service Commission for permission to extend the system to the new Grand Central Station. This extension will cost in the neighborhood of \$5,000,000, the proposed work being under Sixth avenue to Forty-first street, under Bryant Park to Forty-second street between Sixth and Fifth avenues, and under Forty-second street to Lexington avenue. The completion of this extension to the McAdoo tunnel system will greatly improve the transit facilities.

The exporting and importing firm of Schuchardt & Schutte is now located in its new quarters in the West Street Building. The company has acquired the store space at No. 16 on the Albany street side of the building and has a large area for showroom purposes, where machine tools and like equipment will be demonstrated to possible purchasers. Commodious offices are located on the floor above and can be reached by a stairway from the demonstrating room. The company has more than twice as much space as it had at its former location at 136 Liberty street.

## Philadelphia Machinery Market.

PHILADELPHIA, PA., February 16, 1909.

A little further improvement is to be noted. Business has not been large but more sales are being made of moderate sized lathes, drill presses, shapes and milling machines. Planers and heavy tools, both of a standard and special character, are still in light demand. While business in some directions is considerably better than at this time a year ago, it is still far from normal. Sales are still of an individual character, but a little more freedom is to be noted in placing orders. Inquiry has been a shade better, and comes from a somewhat wider range of territory; several propositions requiring a pretty fair number of tools are under consideration and the trade on the whole feels more encouraged. What little improvement there has recently been has benefited merchants to the larger extent, they being able to supply tools from stock or when necessary from makers' stocks, so that little can be said as far as any betterment on the part of manufacturers is concerned. Plants continue to be operated on a basis of 50 to 60 per cent., while there are still some that have not yet been able to attain that percentage. A fair run of business develops in the second-hand machinery field, but sales are rather scattered. Several pending propositions for boilers and engines of medium capacity, both new and second-hand, have been closed; the larger deals before the trade, however, develop more slowly.

The output of the foundries in this territory is somewhat larger, but new business makes meager gains. The steel casting plants hold production on about an even basis, under which condition it is interesting to note that the Deemer Steel Casting Company, New Castle, Del., has decided to go ahead at once with the equipment of a new plant at that place, which has been in contemplation for some time. While the melt in the gray iron foundries is reported better in some directions, those usually producing a heavy tonnage of general machinery castings report no improvement in the demand.

The Northeast Manual Training School, through A. F. Hammond, superintendent of supplies, room 392, City Hall, will receive bids until February 17 for furnishing tools and equipment for the wood and metal working departments.

George C. Morgan, Chicago, Ill., will, it is stated, prepare plans for a new water works system and plant, to be installed by the municipal authorities of Catasaqua, Pa.

The Department of Public Works, city of Philadelphia, will receive bids until March 15 for the construction of the new Queen Lane filtration plant, to be erected on the site of the present reservoir of that name. The total cost is estimated at \$2,500,000, of which \$800,000 is now available. Bids, however, will be taken for the complete work, as additional funds will be applied to the contract from time to time as required. The plans provide for 52 preliminary filters and 26 final filters, the present basin being used for the storage of filtered water. The plant will have a capacity of 80,-

000,000 gal. daily, and when completed will enable the entire city to be supplied with filtered water.

W. E. Sexton, engineer, 46 North Twelfth street, this city, will be ready about March 1 to take proposals for the erection of a new waterworks plant to be built in Branchville, N. J.

Wilson, Harris & Richards, architects and engineers, this city, have completed plans and specifications for a two-story factory building, 50 x 150 ft., to be built at the Catholic Protectory for Boys, Protectory Station, Pa.

The Standard Pressed Steel Company reports an increase in the number of orders taken, both from foreign and domestic sources, but the individual orders continue small, so that in the aggregate the volume of business booked does not show any marked increase. Export trade shows a more decided betterment, some good orders having been booked for shipment to Belgium, Italy, Switzerland and Australia. While business on the whole is still irregular, the outlook for the future is believed to be more encouraging.

The Philadelphia Roll & Machine Company is running its plant five days a week and reports orders for both sand cast and chilled charcoal iron rolls somewhat better. Several orders for heavy castings, such as hammer blocks and dies, have also been booked, but the demand for mill machinery is light. Deliveries on heavy rolls have been irregular, although a good tonnage was recently delivered to several iron and steel mills in this vicinity.

An organization composed of steam engineers and manufacturers of and dealers in machinery and steam supplies has been formed in Baltimore, Md., to bring sellers and consumers closer together for their mutual benefit. The organization is to be known as the Engineers' Exchange. Headquarters will be established in the business section of the city, where a permanent display of engineers' and steam supplies will be maintained. At a meeting held February 8, the following officers were elected to serve for the ensuing year: President, George L. Sleight; vice-president, James Gardner; second vice-president, D. J. P. Murray, Anchor Packing Company; secretary, Harry A. Philips, Baltimore Retort & Fire Brick Company; treasurer, Henry Kries, Crook-Kries Company. A Board of Governors, composed of 15 representatives of the trade, has charge of the preparing of constitution, by-laws and plans for the organization and management of the exchange and exhibition.

## Chicago Machinery Market.

CHICAGO, ILL., February 16, 1909.

Very little of specific news interest attaches to the transactions reported in the machinery market for the past week. About the only feature indicative of more than passive interest in any given industry is a generally better demand for machine tools from automobile manufacturers. Possibly the automobile show held last week at the Chicago Coliseum, which was largely attended by makers of cars from all parts of the country, was in part responsible for the increased sales and inquiries from this source. At any rate all indications point to a busy season ahead for the automobile trade, and in consequence the machine tool houses expect that activity in this line will result in considerable business. Whether or not there is any increase in the general demand is hard to determine because of the uneven distribution of business. Some interests report an increase of business over the corresponding period of January, while others exhibit contrary results. More uniformity, however, is observed in the lines supported directly or indirectly by agricultural demand. Thus it is noted that builders of small gas engines are fairly busy and also that the small shops of the West are conspicuous among the buyers of small tools. On the whole it may be said that trade in all lines is rather better than might be expected in face of all the opposing forces operating against industrial expansion at this time.

The Jeschke Mfg. Company, Bellevue, Ohio, has leased part of the plant formerly occupied by the Bellevue Pipe & Foundry Company, which it will utilize for the manufacture of several agricultural implements, including a tile ditching machine and one-horse, two-row corn cutters. A few machine tools, such as lathes, shapers, punches and drill press will be required for the equipment of the factory.

The Texas Machinery & Supply Company, which operates a large house in Dallas, Texas, has just opened a branch in Houston, Texas, with offices in the Brazos Hotel Building. A stock will be carried at that point for the accommodation of the trade in south and southeast Texas. Special attention will be given to the Fairbanks-Morse lines of internal combustion engines of all types, and electrical and pumping machinery. The branch is in charge of W. C. Woodlief, formerly assistant manager of the Dallas house.

F. O. Ladd, Paton, Iowa, is erecting a new blacksmith and machine shop 32 x 60 ft., which will be equipped with suitable tools and machinery. A Fuller & Johnson engine has been installed, and a disc sharpener, power hammer and second-hand lathe, with a 5 or 6 ft. bed are yet to be purchased.

The Browne-Mills Electric Company, North Manchester, Ind., has contracted with the Western Electric Company to replace its present generative equipment and greatly enlarge its capacity. The new machinery will be installed about May 1, when the present station equipment, except the boilers, will be removed and disposed of.

The Great Bend Electric Company, Great Bend, Kan., is about to begin the erection of a new power plant building. Contracts have been let for the machinery equipment, which is designed to triple the present capacity. One of the units purchased is a 300-hp. Buckeye producer gas engine direct connected to a 200-kw. Western Electric generator, the other being a 150-hp. unit of the same type, direct connected to a 100-kw. Western Electric generator.

Among the recent sales made by the Pfannmueller Engineering Company, Chicago, are several which reflect a fair demand for motive power equipment from some of the larger industries. These include a 40 x 72 in. heavy duty Corliss engine for a tin plate mill in the Pittsburgh District; an 18 x 42 in. Corliss engine for a Michigan sugar plant; six 125-hp. boilers for installation in a Northern saw mill and three of like capacity, together with a 50-ton ice machine for a refrigerating concern.

## Milwaukee Machinery Market.

MILWAUKEE, WIS., February 16, 1909.

An encouraging feature of the present situation is the increased activity of foundries, both those which depend upon custom work and those that are operated in connection with large metal working establishments. Orders of considerable size, which were taken just prior to the holidays and have since been in the drafting room, have now reached the stage where patterns and castings are required, and they will soon be ready for the machine shops. In several of the more important works, where many of the big tools are still idle, these orders will in a short time bring about a decided transformation. Meanwhile the smaller plants and specialty shops are experiencing an influx of new business, and while orders cover small lots, the aggregate being placed is considerable.

Here the tariff appears to be a material factor, and in the minds of many an unsettled feeling will remain until Congress outlines a definite policy, even though the effect of any probable change has already been discounted by the majority of manufacturers. Prices for finished products hold steady, and there seems to be no disposition here to follow the cutting said to have been started by some machinery builders elsewhere; local conservatism has, in fact, never been shown to better advantage.

The largest builder of power and electrical machinery in this city has issued a statement to the effect that orders received during December, 1908, showed an increase of 40 per cent. over the corresponding month of 1907, and that in January, 1909, the volume of business was nearly one and one-half times that of December. As compared with January, 1908, it was three times as great.

Among the new industrial plants now contemplated is the erection of an eight-story block, 100 x 150 ft., on the site of the Melnecke & Son factory, to be used for light manufacturing. The latter will involve a power and lighting plant, as well as heating system, elevators, pumps, &c. Richter, Dick & Reutemann are interested.

The Newton Engineering Company, with whom Milwaukee County canceled its contract for the Grand avenue viaduct after much of the work was completed, has filed a claim for \$165,680.17 damages.

The Chippewa Flambeau Improvement Company, recently formed at Eau Claire, Wis., is said to have for its object the development of water powers and the building of a series of storage reservoirs in that vicinity similar to those of the Great Northern Power Company of Duluth, which now has in operation three hydro-electric generating units of 40,500 hp.

Patents have been issued to F. P. Johness for an improved foundry appliance and to J. M. Scott for a new form of rail spike; both are residents of Racine, Wis.

A new corporation, known as the Wisconsin Composite Brick Company, has bought the two-story factory building on Canal street adjacent to the Sixth street viaduct, and will remodel it for the heavy machinery used in its process.

An important event just consummated is the merging of the Northern Electric Company of Madison, Wis., with the Ft. Wayne Electric Works, Ft. Wayne, Ind., a subsidiary corporation of the General Electric Company. It is understood here that the Northern line of direct current motors will continue to be manufactured, but other apparatus of the Madison company is likely to lose its identity.

Jacobson & De Guerre, Grand Rapids, Wis., have been selected as engineers and architects for the new pulp mill of the Menasha Paper Company, referred to in *The Iron Age* of February 4, the location of which is announced as Ladysmith, Wis. This is to be a concrete-steel structure, and the owner invites inquiries from companies interested in construction work. It is reported here that water power only

will be used, but an auxiliary steam plant may be installed and possibly motors to operate the log haul, conveyors, saws, barkers, pumps, &c. Work on the plant will begin in about two months. Some light machine tools for repair work will likely be purchased.

The Nordberg Mfg. Company has sold the city of Houston, Texas, a horizontal cross compound condensing pumping engine, with Corliss gear cylinders 26 x 58 x 48 in., having a capacity of 15,000,000 gal. daily against a service pressure of 85 lb. or a fire pressure of 110 lb. The guaranteed duty is 140,000,000 ft. lb. The engine must be in operation by July 23.

By-products of the Northwestern Iron Company's furnaces at Mayville, Wis., will henceforth be handled by the Northwestern Lime, Stone & Slag Company, together with the surplus from the Schlesinger quarries and kilns.

The Falk Company reports increased activity in the demand for special track material from electric traction companies, and this is corroborated by the experience of other manufacturing concerns catering to the same line of trade. Orders received here for car equipments include a contract for 200 Christensen air brakes, with special pneumatic governors, to be furnished the Third Avenue Railroad Company, New York. The same system is likely to be in the market again before long for various subsidiary apparatus with which to put its lines in the best of condition, as that intention has been declared.

At Grand Rapids, Wis., the C. J. Litscher Company has been incorporated to do a general jobbing business in electrical supplies, telephone equipments, automobiles, &c. Those composing it have had large experience in central power stations and as salesmen of electrical machinery.

The Morton Mfg. Company, Muskegon Heights, Mich., has been testing out, in one of the principal shops here, some special portable draw shapers, which are said to be remarkable both for size and efficiency. They are motor driven and moved about by cranes, enabling a large casting to be worked upon by more than one tool at a time, the same as one of ordinary dimensions.

The Northern Hydro-Electric Power Company has awarded to John A. Roebling's Sons Company, Trenton, N. J., what is said to be the largest order for wire, cables, &c., placed for some time past. A number of other important contracts of this character will be let for Wisconsin projects within the next few months. The steel transmission line towers of the development mentioned are to be furnished by the Aermotor Company of Chicago.

The Power & Mining Machinery Company is working upon an order for the equipment of Dolese & Shepard's new rock crushing plant, which will be one of the largest of its kind in the world. The J. C. Buckbee Company, Chicago, is the designing engineer.

The Fred M. Prescott Steam Pump Company reports largely increased inquiries from the Western mining fields.

The Gerlinger Steel Casting Company, West Allis, has acquired the site for a further extension to its foundry. An addition of considerable magnitude is also to be erected by the Falk Company at the eastern end of its present plant, which covers 10 acres of floor space.

The Industrial Gas Power Company, Milwaukee, manufacturer of gas producers, has secured as chief engineer, vice C. J. Atkinson, recently resigned, J. G. Aldrich, who has for the past eight or nine years made a specialty of that work. Mr. Aldrich was formerly engaged with the Power & Mining Machinery Company, while Mr. Atkinson is now associated with the Dornfeld-Kunert Company, Watertown, Wis., which has undertaken to build producers after his designs.

## Cleveland Machinery Market.

CLEVELAND, OHIO, February 16, 1909.

Conditions in the local machinery market show little if any change. Inquiries fell off somewhat during the past week, and dealers who have been expecting considerable improvement in the trade are expressing disappointment. With the exception of the placing of two good sized orders, for which inquiries have been pending, business was very light during the week, sales being confined almost altogether to single tools. Orders were placed by the Jeffrey Mfg. Company, Columbus, for the machine tool equipment needed for the enlargement of its plant. There were over 50 tools on the list. The order was distributed among a number of dealers. The only other order of any size was placed by the Packard Motor Car Company of Detroit with a local machinery house. Machinery houses are not hopeful of much improvement in the trade until general conditions show a more rapid improvement than they have during the past few weeks. Frequently inquiries for one or two tools have come in and dealers thought they were at the point of taking the order, when the prospective purchaser, not seeing the improvement in his business that he had been expecting, decided to withhold the placing of the order for the present.

With machine tool builders conditions remain about sta-



tionary, but a number report some improvement in inquiries. Very little business is coming from the railroads as yet.

The outlook for the building of new industrial plants in this territory during the coming spring is very good. Work has already been started on some factory buildings and the contracts for others have been let. A large portion of these, however, are not in the metal working lines and will need little machinery outside of power equipment.

Conditions in the foundry trade remain about stationary. Foundries making light iron castings are fairly busy, but the demand for heavy castings is light.

The question of the location of the general repair shops of the Wheeling & Lake Erie Railroad has been settled by the selection of a site in Brewster, Ohio. Plans have been prepared for extensive shops, involving an expenditure of about \$2,000,000, but B. A. Worthington, receiver, announces that as the project has not yet been financed, it is uncertain when the plans will be carried out in full. It is expected, however, that a portion of the work will be undertaken soon. This will include the erection of a roundhouse, a small repair shop for running repairs and probably a locomotive repair shop. The machinery list has not yet been prepared. Mention was made in this column a few months ago of new machinery requirements for this road for its temporary repair shops at Norwalk, and for extensions to its shops at Ironville, near Toledo. Purchases of equipment for these shops have all been made, with the possible exception of a few small iron and wood working tools. The car repair shops at Ironville are being enlarged at an expense of about \$150,000 for building extension and machinery, and these shops, when completed, will be in shape to handle the heavy car repair work for some time.

The G. C. Kuhlman Car Company, Cleveland, builder of street cars, has recently taken some good orders and reports that the outlook for the year is very satisfactory.

The Pilot Heater Company, Lorain, Ohio, has been incorporated, with a capitalization of \$100,000, to build a plant and manufacture several heating devices that have been invented by Rev. H. W. Pilot of that city. The incorporators are H. W. Pilot, Robert Farren, Charles T. Clark, E. F. Harlan and Harvey W. Smith.

The National Adding Machine Company, Cleveland, has increased its capitalization from \$200,000 to \$500,000. The company intends to branch out by the establishment of a number of sales offices in various parts of the country, and later in the year will probably erect a large addition to its plant.

The Winslow Mfg. Company, Toledo, has been incorporated, with a capitalization of \$60,000, to manufacture a new voting machine. The incorporators are Howard Lewis, Charles B. Wingarter, F. C. Lewis, F. J. Holmer and Charles T. Lewis. The company has leased the upper floor of a building on Madison avenue, formerly occupied by the Pope Motor Car Company.

The plant of the John F. Byers Machine Company, Ravenna, Ohio, builder of hoisting engines, which has been running at very limited capacity for some time, started up with a good force of workmen this week. Recent orders have depleted the company's stock and a marked improvement in inquiries is reported.

The A. C. Williams Company, Ravenna, Ohio, maker of hardware specialties, reports that its plant is running at full capacity and that it has all the orders it can fill. The past year, in spite of the depression, was the most successful in the company's history, with one exception, and the usual dividend was declared.

Owing to the large attendance that is expected, the place of holding the annual meeting and dinner of the Employers' Association of Cleveland has been changed from the Chamber of Commerce to the Hollenden Hotel. It will take place Thursday evening, February 18. The association is composed of nine individual associations of employers and in addition 400 individual employers of labor. The address of the evening will be delivered by Rabbi Louis Wolsey.

## Cincinnati Machinery Market.

CINCINNATI, OHIO, February 16, 1909.

The machine tool trade in this section is not satisfactory. While earlier in the month buying of standard tools seemed to be rather impartially distributed among the makers of lathes, milling machines, shapers, planers and drills, and there was some business for all, it now seems to be confined largely to the lathe and milling machine manufacturers, whose output is in steady and increasing demand from the automobile builders. The trade is awaiting anxiously word from the Delaware & Lackawanna and Carolina, Clinchfield & Ohio railroad lists. A representative of a large local tool building plant has just returned from Johnson City, Tenn., the headquarters of the latter company, and reports that nothing may be expected from this source earlier than the latter part of February or early in March.

In the line of ice making and refrigerating machinery

the local plants making a specialty of these are feeling quite encouraged over the orders booked since the first of the year and which are increasing as the season advances. Medium and small size electric power generating machinery is also in demand.

Dealers report a better inquiry and sale for the larger and heavier special machines and tools for general manufacturing concerns, and a few for installation in repair shops of the railroads and car building plants.

Machine tool builders report but little inquiry from abroad. Recently some fair size shipments were made to Australia and South America.

J. A. Bennett of Hartford, Conn., was in the city a few days the past week and was entertained at dinner at the Business Men's Club by representatives of what the daily press humorously denominate "the Big Six." He told of his observations in the machine tool markets of China and Japan, from which countries he has just returned. Mr. Bennett believes the American tool has a great future in those countries, but says at present the local dullness is reflected there. Mr. Bennett will assume an important position with the Lodge & Shipley Machine Tool Company about March 1. Those present at the dinner were: President Wm. Lodge and Vice-President Murray Shipley of the Lodge & Shipley Machine Tool Company; Fred A. Geier and C. Wood Walter of the Cincinnati Milling Machine Company; George Gradolf of the Bickford Drill & Tool Company; B. B. Quillen of the Cincinnati Planer Company, and A. Tuechter and Sherman Schauer of the Cincinnati Machine Tool Company.

The local machinery and machine tool manufacturing community was interested in the visit to the city on Saturday of Dr. Henry S. Pritchett of New York, formerly president of the Massachusetts Institute of Technology, now president of the Carnegie Foundation Fund, and Charles F. Perry, director of the School of Trades of Milwaukee. Both gentlemen were guests of honor at the monthly dinner of the Queen City Club, and both spoke on industrial topics—Dr. Pritchett on "The Meaning of Industrial Education," and Mr. Perry told of the "Problems Incidental to the Establishment of Industrial Education in the Public Schools." Dr. Pritchett paid a glowing tribute to the University of Cincinnati, which originated the co-operative education idea, and Professor Perry exhibited a number of tools and implements to emphasize particular points in his address. Dr. Pritchett visited Prof. J. L. Shearer, superintendent of the Ohio Mechanics' Institute, while here, and was shown the plans for the magnificent \$500,000 building soon to be erected for that institution through the generosity of Mrs. Thomas Emery. The visitor complimented Cincinnati on having in prospect what will be the finest monument to mechanical and technical education in the world.

The Queen City Machine Tool Company reports a fair inquiry from all points. A recent shipment was of a 24-in. motor driven shaper with gear box to Texas; another, a 20-in. regular went to New York.

The Runyan Concrete Machinery Mfg. Company, Canal Dover, Ohio, which recently elected directors for the year, voted to make an exhibit at the cement show to be held in the Coliseum, Chicago, in March. Secretary H. W. Streb is making preparations for the display. Officers and directors of the company are as follows: H. E. Graham, president; D. Defenbacher, vice-president; H. W. Streb, secretary, and S. L. Holmes, treasurer; George H. Macey, C. M. Runyan and F. A. Smith.

The American Machine Mfg. Company, Detroit, Mich., has signed a contract to establish its business in Elwood, Ind., about May 1. The company manufactures large automobile trucks and expects to begin operations with a force of 75 men. It is announced that the company has machinery, material and property amounting to \$75,000, and is to reorganize under the laws of Indiana with a capital stock of \$250,000.

A communication from Secretary Howard Seltzer of the Ohio Seamless Tube Company, Shelby, Ohio, states that the company's new plant is rapidly nearing completion. The machinery is now being installed, and if no unforeseen delays are encountered it is expected to be in operation in about six weeks. When completely equipped the new mill will have approximately the capacity of the old Shelby mill.

Manufacturers of portable electric drills and grinders report business very good since the beginning of the month, the automobile manufacturers, as in other tool specialties, furnishing the major portion of the orders. The Hisey-Wolf Machine Company, which is enjoying quite a run of prosperity since the assumption of management by Walter J. Friedlander, has redesigned and improved a number of its leading specialties in portable tools and grinders. This company reports sales of the first half month as eminently satisfactory with inquiries increasing and quite promising.

## New England Machinery Market.

BOSTON, MASS., February 16, 1909.

Some bright spots are visible in the machine tool trade. One or two New England dealers have noted a slight increase in business as compared with a fortnight ago. But, as a whole, the market has not moved from the halt which came in the middle of January. One of the dealers in looking back over his books has found that February is usually somewhat quiet as compared with January, but is followed by better business, a slight falling off in April and a first rate May trade, and the rule may hold good this year, which would mean some improvement almost immediately. A report from the Chicago store of one machinery house shows that last week's business was a record in its totals, and the week previous was almost equally good. The Philadelphia store of the same company has found demand a little better. It was noteworthy in the Chicago report that quite a large percentage of the orders was from users other than the automobile builders.

A little complaint is heard of the cutting of prices. Until now there appeared to be little or no occasion for this, except where certain manufacturers had considered it the wiser course to make a slight decrease throughout their lists, following the market conditions. It is not believed that there will be any great amount of price cutting of the indiscriminate sort so late in the period of dullness. Most dealers and manufacturers continue to maintain a stiffness in their lists, in spite of the fact that some customers show signs of holding out for better terms. Of course the dealers, in taking second-hand machines in part payment, may make generous concessions, but, even so, a return of a prosperous market should enable them to dispose of their stocks of used tools at advantageous prices, so that in reality they have given the customer no more than will be received back later.

The brass industry of the Naugatuck Valley has not felt the slump as much as many metal lines. Even the machinery builders who sell to the brass people, though as a rule not very busy, are not so vitally affected as are the builders of machine tools proper. The brass mills and the manufacturers who consume their products have noticed a slight recession, but it is not important, to judge from the current talk in Waterbury and other brass centers.

In considering the general market it should not be lost sight of that its aspect as it affects the machinery trade is probably the gloomiest of all. There are many instances in New England where mills and factories are very busy. The contrast between degrees of activity is marked. One hears all kinds of statements from manufacturers, from entire satisfaction with conditions to complaint of dullness and apathy.

The business of Beaudry & Co., Inc., 141 Milk street, Boston, will not be affected by the death of Alexander Beaudry, the president and treasurer of the company, who has had little to do with the management in recent years.

W. J. Turner has been appointed to succeed William R. Barber as manager of the Putnam Foundry & Machine Company, Putnam, Conn. Mr. Turner has been associated in the business for 20 years.

The business of George Miles, Winsted, Conn., manufacturer of pneumatic and cable transmission, who died recently, will be conducted by Mrs. Miles, under the name of the George Miles Company.

The Young Machine & Tool Company, Worcester, Mass., manufacturer of lathes, shears and punches, whose manager, Willie C. Young, died recently, will continue in business without interruption.

The W. H. Stearns Stamping Company, Worcester, Mass., manufacturer of sheet metal stampings, has moved its plant from Beacon street to 34 Southbridge street. Owing to the increase in business it was necessary that the company have larger quarters and increased facilities, which have been provided at the new location.

The Turner & Seymour Mfg. Company, Torrington, Conn., is building a new foundry, 50 x 100 ft.

The Boston branch of the Charles A. Schieren Company, New York, will be located after February 23 at 641-643 Atlantic avenue, opposite South Station. The new location will have a floor space of about 5500 sq. ft., and will be one of the best appointed leather stores and belting shops in Boston.

The annual report of the Fore River Shipbuilding Company, Fore River, Mass., contains the statement that the company has secured the exclusive license for the Curtis marine turbine in the United States.

The United States Court of Appeals has handed down a final decision in favor of the plaintiff in the case of the E. J. Manville Machine Company, Waterbury, Conn., vs. the Excelsior Needle Company, Torrington, Conn., an action for the infringement of a patent on a machine for forming nipples, a litigation that has been in the courts for a considerable time.

The International Oil Engine Company, Danielson, Conn., has passed into the hands of a receiver on the application of its president, W. P. Hatch. John A. Paine of Danielson, has been appointed receiver by the Superior Court.

The Standard Novelty Company, Seymour, Conn., has established a factory in the Still River Mfg. Company's building in that town, and will manufacture automobile radiators, sheet metal novelties and special machinery. John T. Istas is the manager.

The project of developing large additional water power from the Connecticut River in the vicinity of Windsor Locks, Conn., has developed into a sharp contest between the Connecticut River Power Company, which operates a power system at Windsor Locks, and a new corporation, already referred to in this column, known as the Enfield Power Company. The Connecticut River Company has made plans for a dam across the river between Windsor Locks and Enfield, which would make available some 10,000 hp. now going to waste. The company already has one canal on the west bank of the river, which conducts water to the wheels of a number of manufacturing establishments in Windsor Locks. The plans call for a second canal and the establishment of a large central power station from which electricity would be distributed as desired by customers. The Enfield Power Company has a similar project. Both provide for a lock which would permit of the navigation of the river between Hartford and Holyoke, Mass., under ordinary conditions.

Other water power projects for New England are about as numerous as usual. The Oxford Linen Mills Company, North Brookfield, Mass., has acquired a water privilege and plans to establish a hydroelectric plant to develop between 150 and 250 hp. The Goodell Cutlery Company, Antrim, N. H., is preparing to utilize a large water power to generate electricity for manufacturing purposes. A dispatch from Holyoke, Mass., states that the new power plant of the Lyman Mills, work upon which is beginning, will develop 10,000 hp; with provision for future extension to 15,000 hp.

The Taylor Machinery Company, recently organized, has opened an office at 8 Oliver street, Boston, Mass., for the sale of a general line of machinery. The company will be under the management of Thomas Irving Taylor, who was connected with the Boston office of Manning, Maxwell & Moore from 1900 to 1905, and with the hoist department of the Sprague Electric Company at its Chicago office from 1905 to 1908. Mr. Taylor has just returned from a 10 months' trip around the world, during which he visited a number of the South Sea Islands, as well as New Zealand and Australia.

## Government Purchases.

WASHINGTON, D. C., February 16, 1909.

The Isthmian Canal Commission will receive bids until March 1, Circular No. 494, for a power hack saw, band saws and other supplies.

The Isthmian Canal Commission will receive bids until February 19, Circular No. 494A, for one 20-in. relay dredging pump, direct connected to alternating current motor.

The following bids were opened February 9 for machinery for the navy yards:

Class 1.—Ammunition hoists and electric equipment—Bidder 33, Cutler-Hammer Mfg. Company, Milwaukee, Wis., bid A, \$53,154; B, \$60,187.50; C, \$60,187.50; D, \$112,500; 55, Diehl Mfg. Company, Elizabethport, N. J., bid A, \$70,609; 72, General Electric Company, Schenectady, N. Y., bid C, \$59,575; D, \$102,000; 180, B. F. Sturtevant Company, Hyde Park, Mass., items 6 and 6A, \$3950.

Class 2.—Three motor driven bench drills—Bidder 41, James Clark, Jr., Electric Company, Louisville, Ky., \$115; 70, Frevert Machinery Company, New York, \$89; 91, Harron, Ricard & McCone, San Francisco, Cal., \$95; 93, Hisey-Wolf Machine Company, Cincinnati, Ohio, \$97; 194, United States Electrical Tool Company, Cincinnati, Ohio, \$105.

Class 3.—One motor driven lathe—Bidder 44, Compressed Air Machinery Company, St. Louis, Mo., \$1423; 151, Pacific Tool & Supply Company, San Francisco, Cal., \$1489.50; 154, Pratt & Whitney Company, Hartford, Conn., \$1755.

Class 4.—One screw cutting lathe—Bidder 44, Compressed Air Machinery Company, St. Louis, Mo., \$714; 91, Harron, Ricard & McCone, San Francisco, Cal., \$655; 94, Henshaw, Bulkley & Co., San Francisco, Cal., \$804; 151, Pacific Tool & Supply Company, San Francisco, Cal., \$734; 154, Pratt & Whitney Company, Hartford, Conn., \$1166.

Class 5.—One alternating current buffing lathe—Bidder 91, Harron, Ricard & McCone, San Francisco, Cal., \$300.50.

Class 6.—One cold metal cutting-off saw—Bidder 52, Cochran-Bligh Company, Rochester, N. Y., \$886; 91, Harron, Ricard & McCone, San Francisco, Cal., \$905; 126, Manning, Maxwell & Moore, New York, \$1130 and \$1175; 151, Pacific Tool & Supply Company, San Francisco, Cal., \$700 and \$925; 155, Quincy, Manchester-Sargent Company, Chicago, Ill., \$897; 211, Newton Machine Tool Works, Philadelphia, Pa., \$1143 and \$1173.

Class 7.—One automatic saw grinder—Bidder 52, Cochran-Bligh Company, Rochester, N. Y., \$225.50; 126, Manning, Maxwell & Moore, New York, \$250 and \$300; 151, Pacific Tool & Supply Company, San Francisco, Cal., \$215; 211, Newton Machine Tool Works, Philadelphia, Pa., \$238 and \$286.

Class 8.—One motor driven tool grinder—Bidder 70, Frevert Machinery Company, New York, \$370; 91, Harron, Ricard & McCone, San Francisco, Cal., \$472; 94, Henshaw, Bulkley & Co., San Francisco, Cal., \$316; 165, Ransom Mfg. Company, Oshkosh, Wis., \$280.

Class 9.—One universal tool and cutter grinder—Bidder 91, Harron, Ricard & McCone, San Francisco, Cal., \$583.

Class 10.—One engraving machine—Bidder 91, Harron, Ricard & McCone, San Francisco, Cal., \$763.50, \$820.50 and \$898.50; 94, Henshaw, Bulkley & Co., San Francisco, Cal., \$727.

Class 11.—One No. 4 universal milling machine—Bidder 91, Harron, Ricard & McCone, San Francisco, Cal., \$2974; 114, R. K. Le Blond Machine Tool Company, Cincinnati, Ohio, \$2636.50; 151, Pacific Tool & Supply Company, San Francisco, Cal., \$3100.



Class 12.—One crank slotting machine—Bidder 126, Manning, Maxwell & Moore, New York, \$1050; 137, Niles-Bement-Pond Company, New York, \$892; 211, Newton Machine Tool Works, Philadelphia, Pa., \$980.

Class 13.—One shaper—Bidder 44, Compressed Air Machinery Company, St. Louis, Mo., \$441; 71, Fairbanks Company, New York, \$495, \$450 and \$500; 91, Harron, Ricard & McCone, San Francisco, Cal., \$405 and \$377; 94, Henshaw, Bulkley & Co., San Francisco, Cal., \$480; 126, Manning, Maxwell & Moore, New York, \$445; 137, Niles-Bement-Pond Company, New York, \$320; 151, Pacific Tool & Supply Company, San Francisco, Cal., \$400, \$345 and \$445.

Class 14.—Two motor driven tool grinders—Bidder 41, James Clark, Jr., Electric Company, Louisville, Ky., \$75.50; 70, Frevert Machinery Company, New York, \$235; 91, Harron, Ricard & McCone, San Francisco, Cal., \$103 and \$87.50; 94, Henshaw, Bulkley & Co., San Francisco, Cal., \$204, \$104 and \$198; 126, Manning, Maxwell & Moore, New York, \$235.

Class 15.—One drill press—Bidder 44, Compressed Air Machinery Company, St. Louis, Mo., \$229; 70, Frevert Machinery Company, New York, \$178; 71, Fairbanks Company, New York, \$166; 91, Harron, Ricard & McCone, San Francisco, Cal., \$191.50 and \$133.80; 126, Manning, Maxwell & Moore, New York, \$115 and \$195; 151, Pacific Tool & Supply Company, San Francisco, Cal., \$215.

Class 16.—One electric tool post grinder—Bidder 44, Compressed Air Machinery Company, St. Louis, Mo., \$48; 91, Harron, Ricard & McCone, San Francisco, Cal., \$47; 93, Hisey-Wolf Machine Company, Cincinnati, Ohio, \$44; 126, Manning, Maxwell & Moore, New York, \$47; 151, Pacific Tool & Supply Company, San Francisco, Cal., \$44; 194, United States Electrical Tool Company, Cincinnati, Ohio, \$48.

Class 17.—Six nonreversible pneumatic drills—Bidder 39, Chicago Pneumatic Tool Company, New York, \$240; 51, Cleveland Pneumatic Tool Company, Cleveland, Ohio, \$250; 99, Independent Pneumatic Tool Company, Chicago, Ill., \$272; 102, Ingersoll-Rand Company, New York, \$400.

Class 81.—Two boilers—Bidder 20, Babcock & Wilcox Company, New York, \$4679, \$4843.50, \$4036 and \$4166; 66, Edge Moor Iron Company, Edge Moor, Del., \$4250; 76, G. & W. Mfg. Company, New York, \$8700, \$9897, \$9600 and \$9400; 81, A. D. Granger Company, New York, \$9494; 84, Harrisburg Mfg. & Boiler Company, Harrisburg, Pa., \$10,000; 87, Helme Safety Boiler Works, St. Louis, Mo., \$7865 and \$8821; 110, E. Keeler Company, Williamsport, Pa., \$7698; 122, Mosher Water Tube Boiler Company, New York, \$6802; 133, McCoy Engineering Company, Baltimore, Md., \$9677; 145, Oil City Boiler Works, New York, \$750.

Class 82.—One cross compound air compressor—Bidder 6, American Air Compressor Works, New York, \$3590; 12, Bury Compressor Company, Erie, Pa., \$3138; 39, Chicago Pneumatic Tool Company, New York, \$3140 and \$3280; 61, Drew Machinery Agency, Manchester, N. H., \$3065; 86, Hall Steam Pump Company, Pittsburgh, Pa., \$3000; 102, Ingersoll-Rand Company, New York, \$4480 and \$3862; 120, Laidlaw-Dunn-Gordon Company, New York, \$5005, \$3165 and \$2870; 175, Sullivan Machinery Company, Chicago, Ill., \$2035.

Class 83.—Three new model engine lathes—Bidder 71, Fairbanks Company, New York, \$1125; 92, Hendey Machine Company, Torrington, Conn., \$1268; 154, Pratt & Whitney Company, Hartford, Conn., \$1482.75.

Class 91.—One steering engine and gear—Bidder 97, Hyde Windlass Company, Bath, Maine, \$16,200; 212, Williamson Brothers Company, Philadelphia, Pa., \$15,600 and \$14,950.

Class 101.—One triple geared engine lathe—Bidder 16, Baird Machinery Company, Pittsburgh, Pa., \$2030 and \$2140; 70, Frevert Machinery Company, New York, \$2338; 71, Fairbanks Company, New York, \$1550; 78, Garvin Machine Company, New York, \$1625; 105, I. H. Johnson, Jr., Company, Philadelphia, Pa., \$2159, \$1967, \$1971 and \$1796; 120, Laidlaw-Dunn-Gordon Company, New York, \$1785; 137, Niles-Bement-Pond Company, New York, \$1640; 198, Vandyck-Churchill Company, New York, \$1595 and \$2000.

Class 181.—One locomotive crane—Bidder 5, American Hoist & Derrick Company, St. Paul, Minn., \$5425; 10, Browning Engineering Company, Cleveland, Ohio, \$5680 and \$5280; 22, Brown Hoisting Machinery Company, Cleveland, Ohio, \$4885; 35, Cleveland Crane & Engineering Company, Wickliffe, Ohio, \$5350; 98, Interstate Engineering Company, Bedford, Ohio, \$5215; 101, Industrial Works, Bay City, Mich., \$4900; 132, McMiles Mfg. Company, Cleveland, Ohio, \$4765.

Under bids opened February 8, Circular No. 490, for supplies for the Isthmian Canal Commission, Knox & Brother, New York, have been awarded class 24, one hand pipe cutting and threading machine, \$415.

Under bids opened January 26 for machinery for the navy yards, the Diehl Mfg. Company, Elizabethport, N. J., has been awarded class 553, three electric motors, \$95.

Under bids opened February 2 for machinery for the navy yards, the Western Electric Company, New York, has been awarded class 21, two motors, \$241.75.

## Trade Publications.

**Self-Winding Clock Systems.**—Standard Electric Time Company, Boston, Mass. Bulletin No. 11, 8 x 11 in.; 48 pages. Shows electric clocks built in numerous styles and types, including self-winding master clocks or regulators, self-winding clocks that can be used individually or a number synchronized by a master clock, secondary clocks, any number of which can be operated by a master clock, and programme clocks, which in connection with master clocks will sound bells or whistles at specified intervals. The latter systems are especially intended for schools, industrial plants, railroads, &c. The master clocks may also be used to control time keeping devices, such as tower clocks, street post clocks, time stamps or synchronizers for employers' time registers. Various faces and forms of clocks are illustrated and typical installations of systems.

**Machines and Tools.**—Cleveland Punch & Shear Works Company, Cleveland, Ohio. Stock list. Covers machines and small tools for fabricating iron and steel shapes, plates, &c., including punches, coping machines, straightening machines, benders, radial drills, planers, shears and smaller fabricating equipment.

**Air Pump and Jet Condenser.**—Dean Brothers Steam Pump Works, Indianapolis, Ind. Circular. Shows a vertical air pump and jet condenser on which all the valves are accessible without disturbing any part of the pump. The piston rod is water sealed and the stroke is adjustable.

**Boiler Tube Cleaners.**—Lagonda Mfg. Company, Springfield, Ohio. Booklet, 24 pages, entitled "The Scale Question." Illustrates and describes boiler cleaning apparatus. Among the new products is shown the Weinland air driven wing head cleaner, which is a miniature rotary engine. It goes into the tube and rotates the cleaning head in much the same manner as a turbine does. They are made in a number of styles to suit special conditions, some being designed especially for work on thin scale and others for extra heavy work. Mechanical boiler tube cleaners and air cleaners for use on economizers or condensers also are shown, together with the Lagonda automatic cut-off valve and the Lagonda reseating machine.

**Alternating Current Fans.**—Emerson Electric Mfg. Company, St. Louis, Mo. Catalogue, 5½ x 8 in.; 63 pages. Presents a complete line of alternating current fans for use on desks, in private houses, ceiling fans for hotels and restaurants, exhaust fans, &c.

**Metal Drilling and Sawing Machines.**—Hoefer Mfg. Company, Freeport, Ill. Catalogue, 6 x 9 in.; 48 pages. The Hoefer power hack saw is illustrated, which is made in two sizes. No. 1 cuts up to 4½ in. and No. 2 up to 6 x 8 in.; the first takes from 10 to 12 in. blades and the second from 12 to 16 in. blades. A hub drill designed especially for drilling bicycle hubs, friction and belt driven bench drills, assembling drills especially designed for bicycle work, and drills up to 32-in. sliding head drills and 21-in. multiple drills are illustrated. Some of these machines are shown motor driven, and space is given to boring machines, including a combined horizontal and vertical drilling and boring machine. Automatic two-slide wire forming machines and a rotary straightener and cutter are also illustrated.

**Modern Loft Buildings.**—Bush Terminal Company, 100 Broad street, New York. Booklet. Describes the company's loft buildings on the South Brooklyn water front, which are operated in connection with the Bush freight terminals. These lofts are rented with power to manufacturers, and tenants have the benefit of a harbor lighterage service in connection with the use of piers, warehouses and railroad terminal yards. The loft buildings have the advantage of direct track connection with the terminal acting for the trunk lines, which eliminates cartage on railroad shipments. The first block of buildings erected by the company is illustrated, and the booklet includes views of round-houses, piers, railroad yards, &c. A list of the company's fast freight line and steamship connections is given.

**Electrical Equipment.**—General Electric Company, Schenectady, N. Y. Bulletins and folders. No. 4627, superseding No. 4388, shows curve-drawing instruments for alternating and direct current circuits both assembled and in sections, together with specimen records taken from the instruments. No. 4629, superseding No. 4402, describes automobile accessories manufactured by the company in the line of electrical equipment. No. 4630 contains a description of the company's direct current portable instruments, type D P, which have been designed for laboratory and general testing purposes, and No. 4637 describes various styles of tungsten incandescent lamps for battery service. The folder describes the company's transformers for use in connection with moving picture machine arc lamps.

**Foundry Machinery and Equipment.**—Northern Engineering Works, Detroit, Mich. Booklet No. 93. A brief reminder of the company's line of foundry equipment. Includes illustrations and a short description of cupolas, elevators, electric hoists, traveling cranes, jib cranes, industrial cars, tumbling barrels, &c.

**Machinists' Tools.**—J. T. Slocumb Company, Providence, R. I. Catalogue No. 12, 6 x 9 in., 40 pages. The company's line of micrometer sets, which are offered singly and in sets, arranged in a neat box are shown. Reference disks in sets, gauges, combination centering drills, severance centering tools, &c., are also illustrated and described.

**Machine Tools, Saw Grinders, Cutting-off Saws.**—Burke Machinery Company, Cleveland, Ohio. Booklet and circular. The booklet illustrates some of the company's milling machines, with attachments, sensitive drill presses, tapping machines, forges, &c., while the circular briefly refers to the company's saw grinder and saws, including 12 and 20 in. cutting-off saws.

**Swing Gate Valves.**—Walsh & Wyeth, 87 Lake street, Chicago, Ill. The Erwood swing gate valve is shown, claimed to comprise the features of a gate and check valve in one and to be capable of performing the functions of both of these types of valves. The contrivance is illustrated with line drawings and a view of the completed machine. The line drawings indicate the various uses to which the valve can be applied.

**Reamers.**—Cleveland Twist Drill Company, Cleveland, Ohio. Folder. Devoted to high speed reamers which are made by the company in all standard sizes. The body of these reamers is soft steel and the blades are high speed steel, united to the body by a special brazing process.

# HARDWARE

**T**HERE is evidently something to be said on both sides of the question as to the desirability of general publicity of Hardware advertising. The manufacturers look for the benefit which in theory at least should result to them from having the attention of the public directed to their products, particularly in the line of specialties. Merchants are, on the other hand, perhaps, too much disposed to look with scant approval on such methods, because as the result of the general publicity advertising calls are made upon them for goods which they do not regularly carry in stock. The question is thus brought up to them for decision, whether to purchase the goods thus advertised, or induce the inquirers to take something else which answers the same purpose, and may in their estimation and in fact be superior. This is a simple business proposition which each merchant is entirely free to determine on its merits and in accordance with his interest. Magazines and other promoters of this general publicity are clearly taking a wrong and foolish position when they object to such substitution, as they choose to call it. The mere fact that the articles in question are widely advertised is no guarantee of their merit, for the good, the bad and the indifferent are thus with delightful impartiality presented to the public. The unreasonable position frequently taken by the champions of this general advertising, and the fact that the organs, notably the magazines and popular papers in which the advertisements appear, have made foolish statements implying that when merchants suggest other goods in the place of those advertised they are misleading the people, have undoubtedly contributed to prejudice the merchants of the country against this method of marketing goods, notwithstanding the advantage, somewhat expensive, to be sure, which may justify it when regarded from the point of view of the manufacturer.

There is, however, an aspect of this matter to which attention should be directed. It is a significant fact that many of those identified with this general publicity advertising are in favor of a parcel post. Leading magazines and popular journals of wide circulation who make an especial feature of this class of advertising have pronounced in favor of the regular carriage of merchandise in the mails. A reason is not far to seek. Many of the articles thus advertised could with a merchandise post be obtained very readily from the advertiser, be he manufacturer or jobber. The natural result of such advertising is to secure direct relations between the consumer and the advertiser. The intimation may be made in the advertisement that the merchants of the country carry the articles in stock, which is true perhaps in one case in 20 or 50. If the goods are not found in the store to which the person naturally turns for them it is easy to write to the advertiser and with a merchandise post the order would naturally go to the distant city. It is certainly a suggestive fact that many of the magazines and journals of extensive circulation which make a point of cultivating this general publicity advertising of manufactured products are in favor of the parcel post. It is indeed generally understood that they are among the active promoters of the project. At this time when those connected with this general publicity advertising are endeavoring to secure the approval of the trade for this method of marketing goods, this aspect of the case should

not be lost sight of. Encouraging advertising directly to the consuming public may be strengthening the hands of those who in connection with the catalogue houses are actively working for the enactment of legislation directly hostile to the interests of the merchants.

## Condition of Trade.

The Hardware market continues to be without important feature of change. Prices, while not especially strong, are still holding their own pretty well, but those who have occasion to buy at all liberally find that concessions are obtainable in a good many lines outwardly regular. It is a condition of things in which the buyer's skill is tested, as a good deal may be gained as a result of comparing quotations from different manufacturers and placing orders accordingly. The trade are enjoying the advantage of being able to get goods promptly, whether from the jobbers or the manufacturers, a fact which materially simplifies the conduct of business, as there is no necessity of purchasing beyond early requirements. The volume of business which is being transacted by the retail stores varies a good deal in the different parts of the country. In the agricultural sections there is little reason for complaint of sluggishness in business, but even there the effect of the depression is felt to some extent. The discussion of the tariff and the probability of change in duties has naturally a good deal of influence on the movement of merchandise. The uncertainties thus resulting count against the placing of orders beyond nearby needs. One principal source of hesitation in the market at large is the conservatism shown by the railroads and great corporations, and the care with which they are limiting their expenditures to actual necessities. This is doubtless in good part a result of the agitation within the past few years, and not yet concluded, in regard to their regulation, and the passage of laws which while intended to correct evils and abuses and to protect the public have tended to shake the confidence of investors. It remains to be seen how soon and to what extent capital interested in great corporations and especially in railroads and public utilities will deem it prudent, in view of the dangers attendant upon outside control and restriction, to engage with former courage and liberality in the management of their affairs. Until the liberal expenditure on the part of the railroads especially is resumed, or a similar expenditure by other interests takes its place, the market will necessarily miss the stimulating effect of the great outlay of money which characterized the recent period of exceptional activity and prosperity.

### Chicago.

If there has been any acceleration of demand in Hardware lines thus far in February over that of the previous month, it is neither pronounced nor of extended range. If buyers generally were as forehanded in their purchases as they were two years ago, the placing of contracts for future delivery might now be under way regardless of present demand. But this plan of purchase has been, temporarily at least, almost entirely abandoned, and orders are restricted to the bare necessities of stock replenishment. Indeed, this policy is carried to an extreme that would be wholly impracticable were it not for the ready service now available in mill and factory shipments. Just at this season the actual needs of con-



sumers are not pressing, and the stocks of retail distributors are in consequence moving slowly. Under present conditions any weakness in, or interference with, the primary impulses of trade is quickly reflected all along the line. Thus the severe snowstorms and blizzards which covered a wide area of territory in the West and Northwest were felt in a lessened volume of business in the jobbing centers. In some sections of the country railroad traffic was entirely suspended for two or three days. This has, of course, but a passing effect upon trade, but, as has been observed, it is peculiarly sensitive to such influences. It is perhaps not fully realized how little the Hardware trade in the distinctly agricultural States of the West has been affected by the general depression of business in the past year and a half. Expressions obtained from a large number of retail dealers at the Des Moines convention of the Iowa State Association last week made it clear that the volume of business handled in 1908 by these merchants was not appreciably less than that of the year before; not a few, in fact, reported an actual increase. This is further confirmed by the opinion of an Iowa jobber who believed that every live Hardware merchant in the State had done as much business last year as in 1907, and some even more. This simply goes to show the sustaining power of agricultural wealth, since no such conditions are found where it is not the foremost factor.

### Philadelphia.

**SUPPLIEE HARDWARE COMPANY.**—Philadelphia has just passed through a very busy week, having had with us the convention of the Retail Hardware Association of Pennsylvania, represented by a wonderfully large attendance. The week was virtually given up to their entertainment by the Philadelphia jobbers and retailers, and the visitors, from their expressions, seem to have enjoyed every moment of their stay in our midst. Their business meetings were held in the Bellevue-Stratford every afternoon, and the balance of the day was given up to sight seeing and visiting.

The First Regiment Armory was used for exhibition purposes, there being representatives present of the jobbing houses of the city and displays by the jobbers and manufacturers as well of their various lines very tastefully arranged. As an exhibit of Hardware and kindred lines it would be hard to equal, let alone excel, and the various committees, who were responsible for the general result obtained, certainly deserve very great credit.

The event of the meeting was the smoker given at the Hotel Majestic, which was attended, we understand, by about 800, a large number of the employees of the jobbers and retailers being present. The smoker was held in the grand dining room of the hotel. A fine menu and varied vaudeville entertainment were greatly enjoyed by those present, and too much praise cannot be given the Entertainment Committee, supported as it was by the genial manager of the Majestic, James S. McCarthy, who left nothing undone for the pleasure of the guests.

Trade conditions remain about the same. Orders for season goods are rather more noticeable than at our last writing. We feel, however, that after the inauguration of President-elect Taft, and some definite knowledge of what to expect regarding tariff changes, that business will commence to show a marked improvement.

Comparing the conditions for the present year with those of last year we feel that there has been no noticeable decline in the volume of trade, and we are looking hopefully to the future for greatly encouraging conditions, which all signs seem to indicate. There is no change to note in prices, which, by the way, seem to be well maintained. Money conditions throughout the country are very much improved. Collections are good.

### Louisville.

**BEKNAP HARDWARE & MFG. COMPANY.**—The main matter of interest, especially for the last week or so, has been the centennial anniversary of the birth of Abraham Lincoln. It was so ordered in the fates that he should be born on Kentucky soil in what was then Hardin

County (now Larue), 50 miles due south from Louisville, and to celebrate his birth people came from all over the country. There was a notable gathering at the old Lincoln farm, some three or four miles south of Hodgenville. The President of the United States, the Governor of the State, the ex-Governor of Missouri and all other kind of Folk plodded out through red clay and black clunders to do homage to the memory of this great man. The loftiest sentiments of patriotism were evoked by the crowd and the utterances of the notable speakers.

The old cabin, small and inconsequential even as log cabins go, is on the original site, and soldiers guarded the cornerstone of a memorial building which is to shelter this cabin from the ravages of the weather in the many years to come. There is no telling how long this may thus be preserved for future centuries and aeons.

It is a fascinating subject for reflection always, this life and career of Lincoln, because it is a fresh demonstration of the fact that humble origin is no bar to greatness. Lincoln certainly achieved greatness, and won gratitude, and all of the details of his life, from his very earliest infancy down to his untimely end, have been exploited and worked out to the finest detail. A single year will bring out two or three biographies which claim public favor. An ingenious title seems to be all that is necessary to effect big sales.

As for business, the prevalent disappointment has not failed to permeate all parts of the country. It seems written in the book that we shall not be put to strenuous exercise of our faculties, particularly of our speculative ones, until another crop season shall have passed, or at least results of it be made manifest. It is as though the Powers have said: "Not yet; play golf, climb hills, spin out in your automobile, divert yourself in some way—any way; let your brain and talents lie fallow for another term," and we imagine there is nothing to do but to accept this as the inevitable.

Of course, there is a tide of business all the time ebbing and flowing, but the spring tide only mounts up when the moon is just so, and that is just the way it has not seen fit to be. We are lucky not to find ourselves neaped. The demand for Harness is particularly good. The Harness factories are all busily employed. This might be cited as in the nature of an exception.

There is a good deal of talk among bureaus of information of the lack of employment for a large number of men. There is something in this—a large number of people having flocked to the cities in the recent months. This is somewhat a reflection of conditions, but on the other hand, it is begotten to a greater extent by the reports of widespread charitable plans for taking care of people in trouble and distress. It is no wonder that those in the country, who are lonesome or unhappy from any cause, imagine that the distractions of the city life and the helpful influences as shown in settlements, wayfarers' lodges and rescue missions, prove drawing cards. In the first place, the idea prevails that it would be pleasant to have food furnished without the necessity of work or as a result of very little work, and secondly, it is not surprising that people of only moderate mentality are glad to have their thinking done for them.

### Nashville.

**GRAY & DUDLEY HARDWARE COMPANY.**—As the days and weeks go by business continues to greatly improve. Conditions in this section are now beyond any question of a doubt better than they have been for more than two years. Retail merchants are more encouraged, their sales are larger and they are buying more liberally and are carrying better stocks.

Our business for January showed a handsome increase over last January, and for February the increase will be even larger. We feel like from now on there is going to be a steady and healthy increase in business and a general improvement of conditions all round.

There is going to be quite a large amount of building in this city the coming spring. In addition to the new million dollar hotel which is now under course of construction, there is also a half million dollar clubhouse and a half million dollar Y. M. C. A. building, besides a number of handsome residences. In addition to these

buildings, during the past 30 days permits have been taken out for 12 modern apartment houses; several of them will be large and expensive ones, with all of the most up to date improvements. There is a large demand for this class of buildings in this city now, and all that have been built have been most successful.

The local jobbers advise us that collections since January 1 have been very satisfactory indeed.

#### Portland, Oregon.

**FAILING-McCALMAN COMPANY.**—As the year grows older the feeling seems to become more general that this year is going to be one of the best, if not the best, the Pacific Northwest ever saw. Between the influx of population and the tourists certain to come during the year in even larger numbers than usual, and the generally good prospects, we are very much encouraged. The winter has been an exceptionally good one for our great grain staples, and at the same time has been a good one for our rapidly growing fruit industry.

The writer was last week in a position to gain the views of all the jobbers in this section of the territory and found a unanimous agreement that this would be a wonderfully prosperous year. Personally he is of the opinion that this year will eclipse even the wonderful six months of 1907. He hopes that this condition will extend to the whole Hardware trade of the country, but he is firmly of the opinion that it will certainly be true of the Hardware trade of the Pacific Coast.

#### Omaha.

**LEE-GLASS-ANDRESEN HARDWARE COMPANY.**—So far the aggregate of business done since the commencement of the year makes a very favorable showing in comparison with former years. Of course, winter months are always on the quiet order as far as requirements for present needs are concerned, but numerous advance orders have been booked for present and later deliveries, showing that the trade generally feels assured of the coming spring business. At the same time they are equally confident that the present scale of values will be fairly well maintained.

The entire corn belt country may be reported as continuing in a very prosperous condition, and as long as there is enough cheap money to be had for new enterprises, backed by favorable climatic conditions for the requirements of the agricultural community, everything points to a large and satisfactory spring trade.

#### St. Paul.

**FARWELL, OZMUN, KIRK & Co.**—The slow winter months have been on and are still here. They are not so slow as they used to be years ago. The writer recollects the time when it was a serious question with wholesale houses whether it paid to keep their men on the road in the tight winter months. In actual current business it does not always pay, but no house would consider laying off its road men for any part of the winter.

The quiet season gives salesmen an opportunity of getting better acquainted with their customers and of showing their lines of goods; they have also time to plan for future business, and the active, intelligent salesman can use the time profitably. The conveniences and facilities for travel have also been greatly improved and men can get around much better than they could do 25 or 30 years ago.

Still, it is a slow season, and salesmen make some of their trips at large expense and inconvenience, as well as loss of time, and frequently see days when both they and their houses would be quite willing for them to be off the road.

People generally in the Northwest have come to believe that the seasons have changed to some extent in the last three or four decades. It is an open question whether they have really done so. It is true to some extent the seasons show a well developed tendency toward running in cycles or periods. Thus we will have a succession of wet or dry years or running toward lower or higher temperatures generally, but the records of the last 30 or 40 years, it is claimed, do not show any considerable permanent changes.

We have been visited with some heavy falls of snow this winter in some sections, but on the whole it has been a favorable winter.

Prospects of spring trade are good. Collections are somewhat below normal and seem to indicate that the farmers have marketed their grain a little closer than usual.

#### St. Louis.

**NORVELL-SHAPLEIGH HARDWARE COMPANY.**—While we are able to handle business in February without any night work, still there is a steady and regular pull. Sales entered on the books show a substantial increase over last year.

The net results of last year have been figured up and we find them better than we expected. In discussing the business of last year with a number of jobbers and manufacturers, we find they have enjoyed the same experience.

The credit for this is, of course, claimed by each of the several departments. The buying department claim it is because they bought goods so low. The sales department claim it is because they sold goods so well. The stock department claim it is because they filled orders so carefully and complete. The financial department claim it is because rates of interest were lower.

We presume each of the departments is correct. We presume results being better than houses expected is because all their departments, realizing the necessity for carefulness and economy, were more thorough in their work in the year 1908 than for several years before.

When business is good and profits are sure it is only human nature to become a little careless in expenditures. But when everybody, in every department, realizes a necessity exists of saving every cent in the conduct of business, much is accomplished.

No doubt throughout the year 1908 with all jobbers and retailers the size of orders was very closely scanned. When there was any doubt quantities were cut down. Manufacturers and jobbers were both filling orders very promptly. This led the careful buyer to turn his stock of goods more times than other years, when, perhaps, he was more careless.

Then we also believe employees were not slow to grasp the thought that many were out of work and that there would be little difficulty in filling their positions. This thought led them to do more and better work.

I have discussed these questions with a number of purchasing agents of railroads and large manufacturing concerns, and they tell me they have been really surprised to see how they could cut down their purchases and still manage to get along.

All these things go to show that while each one of us has, of course, always been doing his "best," still we find when the pinch comes we can do a little bit "better"—we can figure a little bit closer, we can draw things a little bit finer, and in a large business with all heads of departments and employees working along these lines the saving at the end of the year amounts to quite a considerable item.

In good times when we are all optimists it is so much more pleasant to say "yes" than to say "no," but in hard times we form the habit of saying "no," our moral fiber seems to grow stronger. This leads to the curious thought that people become more religious in hard times. Years and years ago I remember hearing an old man make the statement that a panic is always followed by religious revivals. That thought has remained stored away in my mind for many years. All over this country there are now outcroppings of religious enthusiasm. One revivalist, Gypsy Smith, who came to this city, in a period of about two weeks preached to 250,000 people.

From these things an interested observer would conclude that a commercial "set-back" is not without its compensations.

#### Cleveland.

**W. BINGHAM COMPANY.**—Cleveland, the forest city of the West, leads the world in several articles of manufacture; still the impression prevails that this is a city of steel and iron products largely. This is true in a measure.



Now take another industry—the Cleveland Worsted Mills Company. It is the biggest competitor of the American Woolen Company, the great combine of Eastern mills. This Cleveland woolen mill is strictly a Cleveland enterprise, organized by Cleveland men and with Cleveland capital. Throughout the recent financial panic they kept this mill working full time, and at some periods they worked overtime. They employ about 2000 men and women. This mill consumes 30,000 lb., or about  $2\frac{1}{2}$  carloads, of wool every working day. The finished product amounts to 18,000 yards of cloth a day, or enough to make 1,890,000 suits of men's clothes in a year. Now this is only one of the many great enterprises of Cleveland.

The manufactured articles made in Cleveland are sold in many cities in the United States and in foreign countries, which all goes to prove that Cleveland manufacturers make and carry large stocks. Now on account of the excellent railroad and water shipping facilities the five large Hardware jobbers of Cleveland are great distributors of general Hardware, Mining, Milling and Manufacturers' Supplies all over the United States and in foreign lands.

It is too bad that since last November, when confidence was being restored in a great measure, that so much agitation in regard to the tariff was deemed necessary, because this continued agitation of the tariff question is delaying matters and holding up a great many improvements that are needed and would be entered into if it were not for the fact that there is so much tariff tinkering going on. It is to be hoped that the matter will be settled very soon, and then business will start up with a renewed impetus and there will be a resumption of a healthy trade and widespread traffic will be the lot of all manufacturers, jobbers and retailers, and labor will be fully employed. Don't monkey with the buzz saw; somebody will get hurt.

It is a well known fact that when you curtail or hamper for any reason great enterprises, labor is the first to suffer. When one stops and thinks that out of every dollar that a railroad company earns, 71 cents is immediately redibursed among the public, and the greater part of this is given to labor, capital getting the smallest portion, why would it not be prudent for our Congress to let well enough alone and stop talking tariff; then business will resume its natural channel and the hum of industry will be heard throughout the land. If you reduce prices you reduce wages of labor, and if you reduce this you reduce the consuming power. So it goes down all along the line.

It is said that we now pay American laborers five times the wages in the knit goods industry as they are paid in Germany on the same class of goods. Does anybody hanker to let that material in free of duty? Who would be benefited? Germany, of course. Who would get hit in the neck? American labor, of course.

The general trend of the Hardware business in this section, all things considered, is very good at the present time. Spring goods are going forward in good volume.

Collections generally are good; some people, however, are always behind; it is chronic with them.

### NOTES ON PRICES.

**Wire Nails.**—The newspaper reports that some of the independent mills might reduce prices, whether true or not, has introduced a feeling of uncertainty regarding the future of the Nail and Wire market. This is indicated to some extent by the conservative buying policy pursued by jobbers and large consumers. Owing to present trade conditions demand is confined to nearby requirements. Prices are fairly strong in a general way. Quotations are as follows, f.o.b. Pittsburgh, plus actual freight to point of delivery, 60 days, or 2 per cent. discount for cash in 10 days:

Carloads, to jobbers.....	\$1.95
Carload lots to retail merchants.....	2.00
Less than carloads to jobbers.....	2.00
Less than carloads to retail merchants.....	2.10

**New York.**—Local demand is for small lots, and these are being taken by the trade according to immediate re-

quirements. The base price of \$2.20 per keg for small lots at store is being well maintained.

**Chicago.**—While somewhat short of expectations, the general volume of business is fairly satisfactory. The demand, however, is closely confined to current requirements of the trade, notwithstanding the fact that jobbers' stocks are uniformly below the average carried at this season of the year. But with all the drawbacks of unfavorable weather and other retarding influences, the prospects are that February will develop as much business, and possibly a little more, than January. Prices are in a general way being fairly well maintained. Quotations are as follows: \$2.13 in car lots to jobbers, and \$2.18 in car lots to retailers, with an advance of 5 cents for less than car lots from mills.

**Pittsburgh.**—New demand for Wire Nails continues quiet, and is only in small lots to cover actual needs. There is a feeling in the trade that a readjustment of prices on a lower basis is not improbable at an early date, and with this in view jobbers and consumers are buying very cautiously and only in limited quantities. Stocks all over the country are low, but the mills are able to fill orders promptly, and there is no incentive whatever to buy ahead. An encouraging feature of the market is that notwithstanding light demand, prices are fairly strong, very few complaints being heard of cutting. Quotations are as follows, f.o.b. Pittsburgh, plus actual freight to point of delivery, 60 days, or 2 per cent. discount for cash in 10 days:

Carloads, to jobbers.....	\$1.95
Carload lots to retail merchants.....	2.00
Less than carloads to jobbers.....	2.00
Less than carloads to retail merchants.....	2.10

**Cut Nails.**—Buying is on a comparatively limited scale, immediate requirements only being provided for. The market shows unevenness, as all manufacturers are not maintaining the recent advance in price, which the following quotations represent. Regular quotations are as follows: Steel Cut Nails, \$1.80, base, per keg, f.o.b. Pittsburgh, for carloads. In the Western market Iron Cut Nails are held at an advance of 10 cents per keg over Steel Cut Nails, but this differential is not observed in the East.

**New York.**—Demand in the local market continues comparatively light. For small lots at store Cut Nails are held on the basis of \$2.05 per keg.

**Chicago.**—Beyond the limited amount of buying necessary to replenish broken stocks, there is no demand, of consequence, from jobbers. The storms of the past week have affected trade unfavorably, adding to the general dullness and inactivity. We quote the following prices which, on desirable orders, might be shaded 5 cents a keg: In car lots, to jobbers, Iron Cut Nails, \$2.08; Steel Cut Nails, \$1.98.

**Pittsburgh.**—New demand continues quiet, jobbers and consumers alike placing orders only to cover actual needs, there being no disposition and no incentive to buy ahead. The recent advance made in prices of Steel Cut Nails is not being absolutely maintained by the manufacturers, and the market is somewhat uneven. Regular quotations, which are not strictly observed in all cases, are as follows: Steel Cut Nails, \$1.80, base, per keg, f.o.b. Pittsburgh, for carloads. In the Western market Iron Cut Nails are held at an advance of 10 cents per keg over Steel Cut Nails, but this differential is not observed in the East.

**Barb Wire.**—Demand continues lighter than it was hoped it would, the uncertainty of the market's future probably having something to do with disinclination of jobbers to buy ahead. While regular quotations have not been changed, it is understood that they are not always rigidly maintained on the following basis, f.o.b. Pittsburgh, 60 days, or 2 per cent. discount for cash in 10 days:

	Painted.	Gal.
Jobbers, carload lots.....	\$2.10	\$2.40
Retailers, carload lots.....	2.15	2.45
Retailers, less than carload lots.....	2.25	2.55

**Chicago.**—New orders are not coming in as freely as they should at this time. There is a manifest hesitancy on the part of jobbers to buy ahead of actual needs, in

face of the fact that the prospects for a good spring trade are admittedly promising. We are advised that prices are fairly well maintained. Quotations are as follows: Jobbers, Chicago, car lots, Painted, \$2.28; Galvanized, \$2.58; to retailers, car lots, Painted, \$2.33; Galvanized, \$2.63; retailers, less than car lots, Painted, \$2.45; Galvanized, \$2.75; Staples, bright, in car lots, \$2.25; Galvanized, \$2.55; car lots to retailers, 10 cents extra, with an additional 5 cents for less than car lots.

**Pittsburgh.**—New business is very slow in developing and has been a distinct disappointment to the mills. Demand continues light and is only for small lots to cover actual needs, jobbers and consumers showing no disposition to contract ahead. The feeling is strong that the mills may possibly announce a lower schedule of prices, and with this in view orders have been restricted in volume, and stocks are being kept at a minimum. Prices are fairly well maintained, but it is said slight concessions are sometimes made. Regular quotations are as follows, f.o.b. Pittsburgh, 60 days, or 2 per cent. for cash in 10 days:

	Painted.	Gal.
Jobbers, carload lots.....	\$2.10	\$2.40
Retailers, carload lots.....	2.15	2.45
Retailers, less than carload lots.....	2.25	2.55

**Plain Wire.**—Business is comparatively light and orders are restricted to immediate requirements. Under present conditions prices are fairly well maintained in view of the feeling in regard to the possibility of lower prices. Quotations per 100 lb. to jobbers in carload lots are as follows, on a basis of \$1.80 for Plain, and \$2.10 for Galvanized, f.o.b. Pittsburgh, 60 days, or 2 per cent. discount for cash in 10 days, the usual price to retailers being 5 cents additional:

Nos.	6 to 9	10	11	12	12½	13	14	15	16
Annealed.....	\$1.80	1.85	1.90	1.95	2.05	2.15	2.25	2.35	
Galvanized.....	2.10	2.15	2.20	2.25	2.35	2.45	2.55	2.65	

**Chicago.**—The demand is moderate and includes orders for only such material as is needed for immediate consumption. The same influences that inspire caution and conservatism in other lines is equally effective in re-

stricting manufacturers from anticipating their wants in Plain Wire. It is stated that prices are reasonably well maintained. We quote as follows: Car lots to jobbers, \$1.98, f.o.b. Chicago, and to retailers, \$2.05.

**Pittsburgh.**—Manufacturers of Wire Fencing and other consumers of Plain Wire are not buying ahead, but are restricting orders to small quantities to cover actual needs. So much uncertainty overhangs the market as to the future of prices that jobbers and consumers are not disposed to place new orders for delivery ahead. Regular prices are being fairly well maintained in view of the very light demand. Quotations per 100 lb. to jobbers in carload lots are as follows, on a basis of \$1.80 for Plain, and \$2.10 for Galvanized, f.o.b. Pittsburgh, 60 days, or 2 per cent. discount for cash in 10 days, the usual price to retailers being 5 cents additional:

Nos.	6 to 9	10	11	12	12½	13	14	15	16
Annealed.....	\$1.80	1.85	1.90	1.95	2.05	2.15	2.25	2.35	
Galvanized.....	2.10	2.15	2.20	2.25	2.35	2.45	2.55	2.65	

**Adjustable S Wrenches.**—Bemis & Call Hardware and Tool Company, Springfield, Mass., has made a reduction in the list price of its No. 50 Adjustable S Pipe Wrench, so that it now is the same list as its No. 48 Adjustable S Wrench.

**Rope.**—The demand for Rope continues disappointing as manipulators had anticipated a marked increase in the requirements of the trade by this time. Present prices of Pure Manila Rope are said by one manufacturer to be too low to show profit at the price paid for the Fiber now being worked up. The desire to keep plants in operation appears to be responsible for present prices. General quotations on small quantities of Rope, 7-16 in. in diameter and larger, are as follows: Pure Manila, 8¼ to 8½ cents; Pure Sisal, 6¼ to 7 cents. Mixed grades of both kinds grade down in price according to quality. Jute Rope, ¼ in. and up, No. 1, is 6¼ to 6½ cents, and No. 2, 5¼ to 6 cents.

**Window Glass.**—The production of Window Glass is reported as having increased somewhat during the past week, with trade quiet. It is understood that a list

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was compiled a few days ago by the committee appointed to conclude the formation of the proposed Imperial Window Glass Company of the different wage scales in use, even in the factories which have signed the flat scale. The result is given as follows: Out of 41 operating factories 15 are co-operative, 8 special agreement, 4 sliding scale and 12 flat scale. This would seem to indicate that the cost of making Glass would not average much higher than before the strike for the flat scale went into effect. It has been stated on good authority that of late the labor leaders are accepting the new wage scales with special clauses attached, stating that if Glass does not sell at 90 and 20 per cent. discount for single and 90 and 25 per cent. discount for double strength, or better, from manufacturers' list, the factory will only have to pay on the basis of the old sliding scale. According to reports the general factory quotations are 90 and 30 on single and 90 and 35 on double, and these prices are, it is understood, being shaded by some manufacturers from 2½ to 5 per cent. Discounts of 90 and 30 for single and 90 and 35 for double, from jobbers' list, do not appear to be unusual, although the discount of 90 and 25 per cent. for all sizes of single and double strength was recommended by the Eastern Window Glass Jobbers' Association about two weeks ago.

**Linseed Oil.**—An advance of 1 cent per gallon in Oil has been made by the crushers since our report last week. The statistical position of the market is strong in that the domestic crop of seed is so short that seed has been imported paying a duty of 25 cents per bushel, and there is no over-supply in the Argentine crop. Buying has been confined to small lots, as large buyers do not appear interested. It is understood that crushers are not willing to take orders for deliveries beyond the end of May, as further advances in Oil are anticipated. Quotations in 5-bbl. lots are as follows: State and Western Raw, 55 cents per gallon; City Raw, 56 cents per gallon. Boiled Oil is 1 cent advance on Raw.

**Spirits Turpentine.**—More activity has developed during the week under review in buying by manufacturing consumers than for some time, although the demand has not been for large quantities. As a result there has been a ¼-cent advance on last week's prices. The New York market is represented by the following quotations: Oil Barrels, 43 to 43½ cents; Machine Made Barrels, 43½ to 44 cents per gallon.

THE WITTE HARDWARE COMPANY, Aberdeen, S. D., is now taking possession of a new building which has been specially erected for its requirements. The company which has heretofore been a retail concern is now going into the jobbing business, and stock is being purchased for this purpose. The lines carried by the company will include Builders' and general Hardware, iron and steel, Wagon material, Stoves and Ranges, Tinware, Roofing, Pipe and Fittings, Oils, Varnish and Window Glass, Blacksmiths' Tools and supplies, &c. The officers of the company are A. C. Witte, president; Otto E. Mueller, vice-president and treasurer, and A. L. Mueller, secretary.

PETER A. FRASSE & Co., now at 94 Fulton street, New York, will on or about April 1 remove to 130-132 North street, between Centre and Lafayette. This change of location will enable the house to get the various departments of the business in closer touch with each other, as its Tube and Steel warehouse is nearby, at 140-142 Worth street. At the new address a stock of machine shop, mill and factory supplies will be carried, as at present, occupying the street floor and basement.

THE VAN CAMP HARDWARE & IRON COMPANY, Indianapolis, Ind., with a view to urging its customers to use their influence against parcel post legislation by making protests to Senators and Representatives, is sending out a leaflet in which the resolutions adopted at the last convention of the National Hardware Association are reproduced. This leaflet is being inclosed in all mail leaving the house.

D. M. Peshak, Wykoff, Minn., has been succeeded in the Hardware business by I. W. Peshak.

## NEW YORK RETAIL HARDWARE ASSOCIATION.

**B**AD weather throughout the State interfered considerably with the attendance on the first day of the New York convention, which opened on Tuesday, 16th inst., at Rochester. All transportation facilities were badly hampered by snow and ice, and many members who expected to arrive in time for the first session in the afternoon were delayed until evening. Others deferred starting until Wednesday morning. By Wednesday afternoon it is expected that there will be close to 350 members present, and nearly as many more from the manufacturing and jobbing branches of the trade.

Excellent accommodations for the convention have been found at the Hotel Seneca, a fine, modern house of large capacity. Other hotels of the city are also thronged with Hardwaremen. The formal sessions are held in the handsome banquet room of the Seneca, while the Hardware Show, which is unusually large and attractive, is installed at the Convention Hall about two blocks from the hotel.

All arrangements have been carefully planned and attended to by L. J. Ernst, chairman of the Convention and Exhibit Committee, and his able assistants. The local Reception and Entertainment Committee is headed by John T. Sage. Plans for the week include a smoker Wednesday evening and an elaborate banquet at the Seneca Thursday evening, at which addresses will be made by prominent speakers.

In spite of the weather conditions there was a good attendance at the opening session Tuesday afternoon. After an address of welcome by Mayor Edgerton of Rochester, W. J. Pilkington, Des Moines, Iowa, spoke eloquently on the subject, "The Retailing of Merchandise."

President John Holley Bradish, Batavia, then delivered his annual address, which was an exceedingly able effort. He touched on topics of national importance, such as the tariff, parcel post, good roads, &c., and then referred to many important matters of association policy, regarding which he made some thoughtful and practical suggestions.

At the conclusion of the meeting L. G. Mattison, Newark, who has charge of the Question Box, read a list of topics that had been turned in, and announced that the discussion on succeeding days would be under the direction of Secretary Corey of the National Retail Hardware Association.

## CATALOGUE HOUSES CANVASSING RETAIL HARDWAREMEN FOR BUSINESS.

**I**N our issue, 28th ult., prominent attention was directed to the manner in which one of the Chicago catalogue houses is canvassing for the business of manufacturers and their employees. In this new departure the catalogue house proposed to have the manufacturer virtually act as a sales agent for its wares, the manufacturer being responsible for the payment of goods ordered through him by his employees.

That the catalogue houses generally, and especially the house in question, are going after business aggressively is still further apparent from the fact that even the retail Hardware merchants are now being canvassed for business. This is evident from the following letter, which has been received by a number of retail concerns in the West:

*Gentlemen:*—Your commercial rating is such that we will be very glad to fill any orders you might choose to send us (goods for your personal use or to sell again) at any time on open account, payable by check within five days after you receive the goods.

It is of course understood that any part or all of the goods in any order can be returned to us at our expense (including transportation charges both ways) if they are not perfectly satisfactory.

As we no doubt carry a larger variety of merchandise than any other mercantile house in the world, and as you can readily ascertain by comparison how low our goods are priced, you will certainly find it convenient to use this open account privilege for such service as we can render.

Very truly yours,

P. S.—Under separate cover we are sending you our large catalogue by mail.

## GUN AND AMMUNITION WINDOW DISPLAY.

**A**N idea for an unusual and effective Gun window may be obtained from the accompanying illustration of a display in the store of J. A. Seltzer, Somerville, N. J. Across the rear of the window extended a raised stand about a foot high, over which the Guns were laid with their barrels parallel with the floor and their butts hanging down behind. The ugly looking muzzles, all pointing outward, are rather startling in effect and are almost certain to arrest the attention of the passerby. In the foreground of the window and right under the



*Gun and Ammunition Display of J. A. Seltzer.*

Guns, so to speak, were arranged Ammunition, open and in boxes; display cards, game pictures, hunting paraphernalia, &c. The background was made of gathered cheesecloth set off with draped flags. It may be suggested that this idea could be worked out more elaborately by making the elevation over which the Guns are pointed in imitation of a wall or earthworks, or even by using a log with the bark on, at the same time dressing the window to represent an outdoor scene. It would not be much trouble to arrange a few military hats so that every Gun would seem to have a man behind it.

ROBERT GARLAND, Pittsburgh, president of the American Hardware Manufacturers' Association, advises us that the association has not sent any representatives, nor is it, as a body, officially represented in any way at the Indianapolis convention, which is now considering the establishment of a permanent tariff commission.

The Beebe Hardware Company has bought the Hardware, Tin, Harness and Paint department of the Zion City General Stores, Zion City, Ill. Mr. Beebe has been manager of these departments for several years, and was formerly engaged in the Hardware and Implement business at Wahoo, Neb.

The Central Hardware Company, Mayville, N. D., incorporated with a capital stock of \$35,000, is successor to Bjelde & Skalet. The officers of the new concern are: E. A. Bjelde, president, and O. J. Elefson, secretary.

The Jewell Hardware Company, with main office at Grant's Pass, Ore., has been incorporated with a capital of \$25,000 by L. L. Jewell, A. M. Jewell and A. C. Hough.

Dooley & Dooley, Rockville, Ind., have incorporated under the style of Dooley Hardware Company, and will continue the Hardware business under the same management as heretofore.

McGrew & Bury have purchased the Hardware business of Ikenberry Bros., Marion, Ind.

## RETAIL HARDWARE CONVENTIONS.

During the next two or three weeks the following retail Hardware conventions will be held, the list being arranged in the order of dates:

**KENTUCKY RETAIL HARDWARE AND STOVE DEALERS' ASSOCIATION**, February 23-25, Louisville. Hardware Exposition. Headquarters at Seelbach Hotel. Secretary, J. M. Stone, Sturgis.

**MINNESOTA RETAIL HARDWARE ASSOCIATION**, February 23-26, Minneapolis. Convention and Hardware Exposition at the Armory. Secretary, M. S. Mathews, Guaranty Building, Minneapolis.

**OHIO HARDWARE ASSOCIATION**, February 23-25, Columbus. Convention and Exposition at Memorial Hall; W. M. Crumrine, chairman Exhibit Committee, Salem. Secretary, Frank A. Bare, Mansfield.

**COLORADO RETAIL HARDWARE ASSOCIATION**, February 25-27, Denver. Headquarters and convention at Albany Hotel. Secretary, Adolph Unfug, Walsenburg.

**INDIANA RETAIL HARDWARE ASSOCIATION**, March 2-5, Indianapolis. Headquarters, Hotel English. Hardware Exposition. Secretary, M. L. Corey, Argos.

**SOUTH DAKOTA RETAIL HARDWARE ASSOCIATION**, March 2-5, Huron. Convention and Hardware Exposition at the Auditorium. Secretary, H. E. Johnson, Redfield.

**CALIFORNIA STATE RETAIL HARDWARE ASSOCIATION**, March 10-12, Oakland. Secretary, L. R. Smith, Oakland.

**NEW ENGLAND RETAIL HARDWARE DEALERS' ASSOCIATION**, March 11, 12, Springfield, Mass. Hardware Exhibition. Secretary, Charles L. Underhill, Somerville.

### Georgia Retail Hardware Association.

It has been decided to hold the next annual meeting of the Georgia Retail Hardware Association, E. E. Dekle, Valdosta, secretary, in that city, on May 18, 19 and 20.

### New England Hardware Association.

The New England Hardware Dealers' Association has lately issued the "New England Hardware Bulletin," the purpose of which is to direct attention to the annual convention which will be held at Springfield, Mass., March 11 and 12. Portraits are given of the officers of the association and other prominent retail Hardware association workers in New England. Other features are a poem by "A Hard Worn Man," and an article from Mike Kinney. There is also an address to the retail Hardwaremen of New England from S. H. Thompson, president of the association. The programme for the meeting is set forth and a list of the convention committees and of the exhibitors up to the time of going to press given.

The headquarters of the association will be at Cooley's Hotel, the Hardware exhibition being held at Graves' Hall, adjacent to the hotel. Members are urged to bring their ladies, as special provision has been made for their entertainment, and on Friday evening the annual ladies' night banquet will be held. The New England Passenger Association has granted a special rate of a fare and three-fifths for the round trip on the certificate plan.

The members of the association will be the guests of the J. Stevens Arms & Tool Company, Chicopee Falls, Mass., on Friday forenoon, when special cars will be provided to convey them to that place. On their arrival they will be conducted through the extensive plant of the company and later will be entertained at luncheon.

C. E. PEABODY & Co., 155 Chambers street, New York, have been made representatives for Eastern territory of the S. & C. Company, Springfield, Mass., which manufactures many Hardware Specialties, including Patented Screwdrivers, Pliers, Cold Chisels, Tack Pullers, Fruit Jar Openers, Box Openers and several kinds of Punches for different purposes.

THE Lockport, N. Y., plant of the Boston & Lockport Block Company was destroyed by fire on the night of the 13th inst. We are advised, by M. H. Tarbox, treasurer of the company, that the Boston factory is in position to take care of all orders, and that there will be little if any delay in meeting the requirements of customers.



## SHOP FORMS OF A PENNSYLVANIA FIRM.

**T**HE accompanying illustrations represent forms in use by Bard & Cheney, Port Allegany, Pa., who conduct a tin and plumbing shop in connection with their Hardware and Stove business. Fig. 1 shows a heavy manila tag, 3½ x 5½ in. in size, printed in black, which is attached to each repair job, and generally goes out

○

# Repair Job

---

## BARD & CHENEY,

Port Allegany, Pa.

---

NAME. *A. Jones*

DATE REC'D. *8/5/08*

PROMISED. *8/7/08*

PRICE. *157*

PAID. *8/7/08*

REMARKS.

*Solder Mash*

*Boiler*

TIN SHOP.					
BARD & CHENEY.					
PORT ALLEGANY, PA.			<i>Aug 18 - 09</i>		
FOR <i>Mogone</i>					
ORDER TAKEN		WHEN PROMISED <i>yesterday</i>			
CONTRACT <i>No</i>		DAY WORK <i>Yes</i>			
ESTIMATE		TOTAL COST <i>(Gals)</i>			
DESCRIPTION OF WORK <i>make Pan 12X20X2 Outlet acornner 1" Tub 3' long.</i>					
MATERIAL					
<i>5x Galv Tin</i>	<i>bx</i>	<i>56</i>			
<i>1 Solder</i>	<i>sz</i>	<i>35</i>			
TIME TINNER <i>2 hrs</i>	<i>gx</i>	<i>100</i>			
TIME HELPER	<i>zfa</i>	<i>191</i>			
TOTAL					

**Fig. 1.—Repair Job Tag, 3½ Fig. 2.—Shop Work Order**  
 & 5½ In. Card, 3¼ & 7½ In.

TIME SLIP	
BARD & CHENEY	
DATE.	8/20/08
WORKMAN	<i>aadirect</i>
JOB	ROU'S
✓ Smith	3
✓ Brown	1/2
SHOP WORK	
On What Employed	HOURS
James Pan	2
Papans	2 1/2
TOTAL HOURS	8

SLIP MUST BE HANDLED IN EACH DAY

~ CHARGE SLIP ~

**BARD & CHENEY.**

Charge to Mr Jones

Ordered by \_\_\_\_\_

Kind of Work gals, Pan

ass.

Date 8/20/88

Workman \_\_\_\_\_

Number \_\_\_\_\_

2 Mrs. Labor Plumber

" " Helper

Material

8 gals Iron

1 Solder

*Chad Rusk*

SEND IN SLIP FOR EVERY JOB (Use "Other" Side of Necessary)

Fig. 3.—Tinner's Time Slip, 3½ x 7 In.      Fig. 4.—Time and Material Record, 3½ x 6½ In.

with the repaired article after the work has been paid for or charged. The form reproduced in Fig. 2 is a manila card  $3\frac{1}{2} \times 7\frac{1}{2}$  in. in size, and is used for recording orders for articles to be made in the tin shop, in this case a galvanized iron pan. The card is handed to the head tinner as an order. When the job is completed the material and time is entered on the card, which is filed for future reference in case some one requires about the same thing, and wants to know what it will cost before giving the order. If necessary a sketch of the article may be made on the back of the card.

TO WHOMSOEVER THESE SALES THIS BILL BROUGHT OF <b>BARD &amp; CHENEY,</b> Hardware, Plumbing, House Furnishing Goods, Stoves, FARM IMPLEMENTS, SPORTING GOODS Soleman: <u>Fort Allegany, Pa.</u>	
11	<u>gro juv</u> <u>city</u> 84 Galv Iron 56. 7 Soldier 35 2 Hs skator <u>100</u> <u>191</u>
No. <b>24</b>	

Fig. 5.—Charge Slip for Time and Material,  $3\frac{1}{4} \times 5$  In.

The time slip,  $3\frac{1}{2} \times 7$  in. in size, illustrated in Fig. 3, is a manila card printed in red. The upper portion is designed for workmen to record time daily spent on outside work. The lower part is for a record of the time, on same day spent on shop work. This shows how the entire 8 hr. of one day were occupied, 2 hr. being spent on the pan for Jones. A time slip is handed in to the office every night by the workmen, who make out a slip for the jobs they

Salesman a 8/24 1906  
**BARD & CHENEY**  
 Hardware, Shoes, Flum, and  
 Foot Alignment, PA.  
 Received of Mr Jones  
Bal Acct to Date  
One 91/00 — Dollars  
1/91 Bard & Cheney

*Fig. 6.—Credit Slip, 3½ x 6 In.*

have been on. If a job is not completed an X is placed before it to show that the charge is not to be made until the job is finished. Fig. 4, 3½ x 6½ in. in size, is a white paper slip printed in red, which is made out by the workman; this one shows the time and material used on Jones' pan. After the charge has been made the initials of the persons entering it are put on the slip. In making charges from workmen's charge slips the tin shop card and time slip are checked to make sure that everything is included.

Name: Joe Doe  
Address: RFD #2  
Date: 8/1/08 Rating: B Limit: 100 00  
Interested in: Farming + Bles  
makes Maple Sugar  
Adv Sent  
#1-3-4

Fig. 7.—Rating Card,  $2\frac{1}{4} \times 4$  In.

For making charges pink paper slips printed in black are used, the slip being made out in duplicate by the aid of carbon paper. The slip used in charging the pan is shown in Fig. 5. The salesman's initial or number and the amount of the charge are run through the cash register.

In Fig. 6 is shown a yellow credit slip printed in black, which is made out in duplicate when the charge is paid, and is also run through the register. The rating card, shown in Fig. 7, is an important factor in the firm's business. This is a tinted card 1½ x 4 in. in size, upon which a rubber stamp is used for making the impression. The rating is obtained through previous experience with a man, or by consultation with local merchants or other persons who are acquainted with the man. A card is made out for every

ARTICLE Gas Range  
NUMBER 72 Burn  
SCT. FROM P7MTC  
DATE BOUGHT 9-88-xm  
COST 3 hot  
PRICE 24.00  
SOLD TO \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
REMARKS:

Fig. 8.—Price Tag,  $2\frac{1}{2}$  x  $5\frac{1}{4}$  In.

one the firm hears or knows of, so as to be prepared should he ever ask for credit. In this case Jno. Doe was considered good for a credit of \$100, and was interested in farming and bees and made maple sugar. "Adv. sent" at the bottom of the card indicates that circular letters Nos. 1, 3 and 4 were sent to Doe. One copy of all circular letters got out by the firm is saved and numbered, with date of issue marked on it. A drawer in the catalogue cabinet is used for keeping the rating cards alphabetically arranged. The price tag, illustrated in Fig. 8, is used on farm implements and machinery, stoves, separators, &c.

## SYSTEM FOR THE RETAILER.

### Tenth Article.

#### Record of Goods Received Before Invoice, Stock Record, Want Book.

BY JOHN A. MANSON.

AS far as possible nothing in business should be taken for granted, and this is particularly true of goods which are unpacked before invoices are received. A memorandum should be taken of all such goods, whether coming by freight or express, as a merchant should know what is received and what he is paying for just the same as he should know that goods going out of his store are either paid for or properly charged. It is very seldom that a freight shipment of goods is received before the invoice arrives, yet it does happen occasionally,

Skates												
Sizes in	8	8 1/2	9	9 1/2	10	10 1/2	11	11 1/2	12			
Jan 10	6	12	4	8	14	5	3	7	4	On hand 7/16		
	10	12	15	10	15	20	10	5		Bought 7/16		
			5	5	8	10	5			7/16		
			5		5	5	5			7/16		
	4	9	6	12	10	8	5	4	8	On hand 7/16		
	10	15	10	5	20	15	10	10	5	Bought 7/16		
Feb 17				2	4	7	3	4	2	On hand 7/16		
				5	5	5	10	5	5	Bought 7/16		

Fig. 1.—Stock Record of Skates.

while goods received by express are in most instances in the store before the invoices get there. A record should be taken of all such goods, the dates when received noted and also the amount of the express charges, all of which are later to be checked off and noted on the invoice when it arrives.

#### Pick Up Orders.

Very often to complete an order the merchant has to call on a competitor or local jobber for some goods, and a clerk is sent hurriedly for them. In all such cases a record of the goods so obtained should be made so that such record can be checked up with the invoice when received.

#### Stock Record.

In an ordinary business a daily stock record cannot be kept, as the profits of the business will not justify it. A thorough inventory should be taken each year and reference to it will help materially in making up various orders. From the inventory, records should be made of any goods of which there is too large a stock, and records should also be made of any goods which it does not pay to carry. The attention of the salesmen should be called to all such goods, and they should be pushed and turned into cash as quickly as possible. A stock record should be kept of season goods such as Skates, Snow Shovels, Ice Cream Freezers, Lawn Mowers, &c., for records of stock

on hand and yearly purchases of such goods are of much help in making up orders, so that stock will be as well adjusted as possible to the demands of the trade. Illustrations of pages from stock records of Skates and Lawn Mowers are shown in Figs. 1 and 2.

#### Want Book.

A want book should be kept, and salesmen should be thoroughly impressed with the importance of using it, not only for entering goods on which the stock is running low or is broken, but also for entering goods that are

Lawn Mowers				
Sizes in	14	16	18	20
Cast	4		3	
	10	25	15	
		5	2	
	3	2	2	
	10	20	15	
Neopore		3	1	
		5	5	
		4	2	
		2	4	
		5	5	
H. H. Imperial		2	4	2
		5	10	5
			2	2

On hand	10/16
Bought	7/16
	8/16
On hand	7/16
Bought	7/16
On hand	7/16
Bought	7/16
	8/16
On hand	7/16
Bought	7/16
	8/16

Fig. 2.—Stock Record of Lawn Mowers.

called for but not carried in the store. The buyer's attention is thus attracted to such calls and consideration may be given to the wisdom of stocking the new lines of goods. If the business will justify it a want book can be kept in each department of the store; otherwise a general want book can be used and subdivided to accommodate leading lines, such as Builders' Hardware, Mechanics' Tools, Paints, Cutlery, Sporting Goods, &c.

#### Display of Reducers.



Reducers as Displayed by Johnson & Mandeville.

AN effective method of displaying Reducers is suggested by the accompanying illustration. Two varieties are shown, one for gas and the other for water pipe. They are joined together to form graduated designs, and as seen in the store of Johnson & Mandeville, Newark, N. J., were arranged with the heavy fittings forming a base, and the rest of the design leaning against the wall. An examination will probably show that leading supply houses are devoting much more attention to the arrangement of their stock than they use to do, and are developing by study effective methods of displaying goods.

THE ST. LOUIS WASH BOARD COMPANY, St. Louis, Mo., will move about March 1 from 810 North Main street, its present location, to 1445-1449 North Second street, where its growing business can be handled to much better advantage.



## Senator Beveridge's Sensational Parcel Post Project.

FROM OUR SPECIAL CORRESPONDENT.

WASHINGTON, D. C., February 16, 1909.

IT is a conservative statement that no move made since the inauguration of the campaign to secure the authorization of a rural parcel post has caused a sensation of such proportions as has been produced by the disclosure of Senator Beveridge's project to obtain authority for an "experiment" along these lines through the passage in the closing days of the present Congress of a joint resolution drafted at the instance of the Postmaster-General, as narrated in our last issue. The retail merchants of the country have risen up as one man to denounce the resolution, and are laying before the Senate and House leaders the facts concerning the inception and development of this project and the menace that it constitutes to the welfare not only of the retail merchants of the country but to the towns and villages in which they carry on their business.

### Protest from the Druggists.

Following the lead of the National Retail Hardware Association, the National Association of Retail Druggists, which has also done yeoman service in this work, has taken the matter up vigorously with the Senate leaders. Chairman Richardson of the Committee on Legislation has addressed the following letter to Senators Hale, chairman of the Committee on Appropriations; Aldrich, chairman of the Finance Committee, and Penrose, chairman of the Committee on Post Offices and Post Roads:

As the chairman of the Committee on Legislation of the National Association of Retail Druggists, I beg to call your attention to a measure introduced in the Senate on the 4th inst. by Senator Beveridge of Indiana, which he then stated he would call up for consideration at an early date—namely, Senate Resolution 124, authorizing an experiment in a parcel post system as applied to rural routes. This measure we regard as a serious menace to the welfare of the retail merchants of the country and especially to those doing business in rural communities. In addition, it threatens the life of these communities themselves, and incidentally it promises such an increase in postal expenditures as will render last year's deficit of \$17,000,000 wholly insignificant.

The subject of a rural parcel post is one to which this association has devoted much attention, and I am in position to say to you very positively that the retail merchants of the country, as represented by our own organization, the National Retail Hardware Association, the National Retail Grocers' Association and other similar organizations, not only do not desire a rural parcel post, which is being urged by the Postmaster-General in their alleged interest, but they are unanimously opposed to it and recognize in it a very grave peril.

Under the present law and regulations rural carriers are permitted to handle packages weighing more than 4 lb. upon the order of any patron of a rural route, and any number of packages may be assembled in one for the purpose of exceeding the 4-lb. limit. The pay for this service is invariably nominal and is usually made in the form of country produce, which is very acceptable to the carriers. The proposed change would cut off this privilege and impose on the retail merchants the necessity of paying postage rates on everything that might be sent out by the carriers. The farmers are making no demand for the service except such as has been artificially stimulated by the Postmaster-General's literary bureau, which has been industriously employed in advocating this scheme during the past two years.

The specious argument employed by Senator Beveridge, that his resolution authorizes merely a test and that if the report were averse the matter would be dropped, I need not discuss with a legislator of your experience. The Post Office Department is already fully committed to the project, the postmasters see in it an opportunity to increase the importance of their offices and therefore their salaries, while within the past three days the Postmaster-General, in a public letter to the heads of the various organizations of postal employees has advised them that he cannot recommend increased compensation for them because Congress is unwilling to adopt his rural parcel post scheme. It is not difficult to forecast the character of the report the department would make to Congress of any "experiment" begun under such auspices.

Senator Beveridge very frankly stated that the resolution proposed by him was practically identical in character with that under which the rural free delivery system was inaugurated. This system was authorized by Congress only 11 years ago with an appropriation of \$10,000, yet the amount carried by the pending post office appropriation bill for this service exclusively for the next fiscal year exceeds \$37,000,000. The revenue per route is less than one-fifth the cost of the service, and the remaining four-fifths is saddled on the taxpayers at large. Even if the Postmaster-General's scheme should add to the revenues of the

rural service—which it would not do for the reason that if it should prove a popular success the increased cost of equipment, personnel, &c., would far more than offset any gain—it would result merely in transferring a large part of the burden to the shoulders of the country merchants. Surely the farmers, who are now enjoying a postal service costing five times what they pay for it, have no right to demand increased postal facilities at the hands of the Federal Government.

The fact that the rural parcel post project is merely an entering wedge for the general parcel post, which in a country like this would bankrupt the Treasury, goes without saying. When Senator Beveridge introduced his resolution on the 4th inst., Senator Tillman, an avowed advocate of a general parcel post, hailed it with great apparent satisfaction, declaring that it was an entering wedge which should be "driven home" as rapidly as possible, and giving assurance that he would vote for it. The Postmaster-General's championship of a general parcel post has been frank and unequivocal, and he has done everything in his power to advance the project. The restrictions which he proposes to throw around the rural parcel post to prevent its use by the big catalogue concerns that would be the sole beneficiaries of either the rural parcel post or a general parcel service are illogical, impracticable, and, we believe, unconstitutional. It would certainly be unjust to legislate in the interest of any class of taxpayers as against any other class, and we ask only that in the contest we are now waging with the monopolistic mail order houses the Government will refrain from aiding either side.

We solicit your co-operation in preventing favorable action on the Beveridge resolution, which can do no good, but which we believe would do incalculable harm.

### An Extraordinary Disclosure.

The reference in Mr. Richardson's letter to the communication of the Postmaster-General to the heads of the various organizations of postal employees calls for an explanation involving the recital of one of the most extraordinary incidents of this remarkable campaign by the Post Office Department. During the present session Frank T. Rogers, president of the United Association of Post Office Clerks; William E. Kelly, president of the National Association of Letter Carriers, and E. H. Roberts, representing the railroad postal clerks, are alleged to have violated the executive order of January 31, 1908, by attempting to influence legislation for the increase of the compensation of the employees of the Post Office Department in the three classes referred to. This order forbids all officers and employees of the Government, either directly or indirectly, individually or through associations, "to solicit an increase of pay or to influence legislation, or to attempt to influence in their own interest any other legislation whatever, either before Congress or its committees or in any way, save through the heads of the departments in or under which they serve, on penalty of dismissal from the Government service."

On the 9th inst. the Postmaster-General served notice on the three employees mentioned that they would be given 10 days in which to return immediately to their posts of duty, and to forward to the Post Office Department a statement of the reasons why they should not be removed from office for violation of the executive order. At the same time the Postmaster-General gave out a statement to the press concerning the action taken by him, adding that he had written letters to the chairmen of the Post Office committees of the two houses declaring that, while he favored legislation to improve the condition of the postal employees, he would not recommend such action at this time in view of the condition of the postal revenue, but that if a rural delivery parcel post should be authorized it would increase the revenue by many millions of dollars without any outlay because there would be no costs for railroad transportation. There are about 40,000 rural routes, and the Postmaster-General in this connection repeated his well worn estimate that "if every carrier averages five 11-lb. packages on each trip at the rate of 5 cents for the first pound and 2 cents for each additional pound to 11 lb., the postal revenues would be increased by \$15,000,000."

### Army of Postal Employees at Work for Parcel Post.

It is not necessary to spell out for the readers of *The Iron Age* the effect which this move by the Postmaster-General is intended to have, and doubtless will have, upon the fortunes of the rural parcel post scheme.

The postal employees have been told in so many words that if this project is adopted it will wipe out the deficit and leave the Department free to recommend increased compensation for all the employees of the service. The postmasters were long ago informed by the Postmaster-General that the plan would result in the handling of enormous quantities of merchandise in the mails and thus increase the importance of the post offices in rural communities and the salaries of the men in charge thereof. The Postmaster-General in his bulletin to the press states that the three men who have been ordered back to duty "represent about 73,000 employees of the postal service." Adding to this number about 50,000 postmasters of all classes, and we have a great army of nearly 125,000 men set at work by the Postmaster-General in the interest of the rural parcel post scheme.

Can any sane man doubt the character of the report that would be promptly rendered to Congress concerning the results of any "experiment" that might be authorized under the Beveridge resolution? The fact that every advocate of a rural parcel post, including the Postmaster-General himself, is an enthusiast on the subject of a general parcel post, looms up in this connection as a menace to every retail merchant and to every small town and village in the country.

### Requests for Catalogues, Etc.

*The trade is given an opportunity in this column to request from manufacturers price-lists, catalogues, quotations, &c., relating to general lines of goods.*

**REQUESTS for catalogues, price-lists, quotations, &c., have been received from the following houses, with whom manufacturers may desire to communicate:**

FROM BRANCH HARDWARE COMPANY, which has recently opened a new store in Branch, Ark., and handles Shelf and Heavy Hardware, Stoves, Tinware, Housefurnishings, Agricultural Implements and Furniture.

FROM ICE & JOYCE HARDWARE COMPANY, which has been incorporated in New Castle Ind. The company carries Shelf and Heavy Hardware, Stoves, Tinware, Housefurnishings, Agricultural Implements, Paints, Oils and Sporting Goods. The store has been improved by new fixtures; mechanics' tools of all kinds have been added, and the stock generally enlarged in all lines.

FROM LUMAN & VAN SLYKE, who have purchased the business of J. H. Rust, Altamont, Kan. The lines handled include Shelf and Heavy Hardware, Stoves, Tinware, Agricultural Implements and Sporting Goods.

FROM ARGO-CLEARING COAL & SUPPLY COMPANY, 1614 Fisher Building, Chicago, which is installing a stock of General and Builders' Hardware, Tools, &c., at Argo, Ill. Copies of catalogues, &c., should be sent to the Fisher Building address.

FROM ANDREW SMITH, who has succeeded to the Hardware, Stove, Paint and Sporting Goods business of Smith & Selk, Two Rivers, Wis.

FROM THE CARPENTER HARDWARE COMPANY, Newcastle, Ind., recently incorporated with a capital stock of \$10,000, to succeed the Bozzle-Wright Hardware Company, the business being continued in the same location. The company will handle General Hardware, Stoves, Ranges, Steel Tanks, Tools, Buggies, Wire Fence, &c.

FROM PEOPLE'S HARDWARE & FURNITURE COMPANY, which has been incorporated with a capital stock of \$10,000 in Rowland, N. C., to carry on a wholesale and retail business in Shelf and Heavy Hardware, Stoves, Tinware, Housefurnishings, Agricultural Implements and Sporting Goods.

FROM CLAREMONT LUMBER & HARDWARE COMPANY, Claremont, S. D., which has been incorporated with a capital stock of \$25,000 and the following officers: F. G. Brooberg, president; W. E. Bowles, secretary; Chas. Bau-

son, treasurer. The company handles Shelf and Heavy Hardware, Stoves, Tinware, Housefurnishings, Farm Machinery, Paints, Oils, Sporting Goods, Lumber and Building Material.

FROM EASTERLING-PATTERSON COMPANY, Barnwell, S. C., which handles Hardware, House Furnishing Goods and general merchandise.

FROM C. A. HJERPE, 67 Arch street, New Britain, Conn., who is handling a line of Shelf Hardware.

FROM PAULEY HARDWARE COMPANY, which has succeeded Concho Lumber Company, in Valera, Texas, carrying Shelf Hardware, Tinware, Tools, Stoves, Leather Goods, &c.

FROM J. W. STEVENS HARDWARE COMPANY, which has been incorporated in Dayton, Wash., with a capital stock of \$25,000. The line carried includes Shelf and Heavy Hardware, Stoves, Tinware, Housefurnishings, Agricultural Implements, Paints and Oils. The company has put in a new front and installed modern fixtures in its building.

FROM STANDER & STANDER, who have succeeded to the Hardware business of Stander & Esmay, Louisville, Neb.

FROM GEO. J. FRANK, Bay City, Mich., who has suffered loss by fire. The lines handled include Shelf and Heavy Hardware, Stoves, Tinware, Housefurnishings, Paints, Oils, Sporting and Athletic Goods and Fishing Tackle.

FROM M. TETTELBACH, 3819 West Twenty-fifth street, S. W., Cleveland, Ohio, handling Hardware, Stoves, Guns, Paints and Housefurnishing Goods.

### PLATE GLASS SHELVES IN WINDOW DISPLAYS.

A WINDOW dresser is often put to it to get away from the effect of flatness, especially where the floor of a window is low, bringing it considerably below the line of vision. A simple and convenient method of accomplishing this is to arrange plate glass shelves, supported by four brass or glass candlesticks, stood on the floor of the window, one at each corner of the shelf, as indicated in the illustration. One or more such shelves may be used in a window; they may be placed wherever most effective in different displays; may be varied in



Plate Glass Shelf Supported by Candlesticks.

height merely by using different lengths of candlesticks, and the shelves may be any desired size.

Among the further advantages of this idea it may be suggested that the candlesticks are included in many Hardware stocks, are themselves ornamental and salable, and thus add to rather than detract from the effect of a window. The shelves set off to excellent advantage small wares arranged upon them, and by elevating them nearer the eye facilitate examination by passers-by. Finally, glass shelves so set up do not in any way obstruct the view of the balance of the window.

THE BETTES & EBSEN COMPANY, 62 Reade street, New York, has been appointed selling agent for New York City and vicinity for Raybestos, manufactured by the Royal Equipment Company, Bridgeport, Conn. This is a lining material, consisting of asbestos fiber held in position by suitable wire mesh and is used largely for lining brakes on automobiles. One of the tests it is successfully subjected to is to heat it red hot in a furnace, without, it is said, deterioration.



## Oklahoma Retail Hardware and Implement Association.

In our last issue a telegraphic report was given of the opening session of the sixth annual convention of the Oklahoma Retail Hardware & Implement Association at Oklahoma City. The sessions covered a period of three days, opening on Tuesday, the 9th, and concluding on Thursday, the 11th.

The central location of Oklahoma City, its sufficient hotel accommodations, which were, however, owing to the presence of two simultaneous conventions, taxed to their full capacity, and the business spirit and attractiveness of the city, rendered it an admirable place for such gatherings. Heretofore the meetings of the Hardware association have been held in the Exposition Hall in the city, but this year the experiment was tried of holding them in the buildings on the fair grounds, and the result was eminently satisfactory.

The exceptionally fine exhibition hall afforded ample space for the display of Hardware and Implements, while the separate building in which the sessions were held permitted deliberation and discussion away from the noise and confusion, inseparable from the display of manufactured products. There appeared to be entire unanimity of sentiment in favor of holding the meetings regularly in the fair grounds, which, though a little out

tions laid down in programme for the consideration of the convention, many of which received more or less complete discussion:

Why so many changes in the retail Hardware and Implement business? The remedy for this.

What do your goods cost you, and how do you figure cost? System in Hardware accounting.

The best way to secure the passage of just laws and prevent the passage of freak laws?

What the National Hardware Association is doing in the parcel post fight.

The traveling man as a booster for association work.

How to get the best results from our clerks.

Shall we have a pedlers' tax? If so, what shall be its scope?

What does the Vehicle warranty man mean to the retail dealer?

Should the jobber protect the retail dealer on Pump goods?

Getting better freight service and more prompt adjustment of claims.

Relations between employer and employee.

How to present our goods to the trade.



M. C. HALE.



FREDERICK PFAFF.



GEO. LARIMORE.

of the city, were easily reached in a few minutes by trolley.

### Oklahoma Hospitality.

In addition to the formal features of entertainment which were so much enjoyed by the members and the visitors generally, there was the manifestation of the characteristic hospitality of Oklahoma merchants and manufacturers toward those in attendance at the convention. Many individual courtesies were thus extended, which gave a pleasant impression of the rapidly developing city and its enterprising business men.

On Tuesday evening, in the Chamber of Commerce, there was a concourse of the visitors drawn there by the double attraction. The early part of the evening was devoted to a lecture on concrete construction, illustrated with many stereopticon views showing examples of buildings of reinforced concrete in various stages. This was followed by impersonations by Nels Darling, whose versatility and ability in this field, his vigor and skill as an opponent of the catalogue house business, as well as his success and influence as a business man, have given him a wide reputation. Very sincere appreciation of the entertainment afforded on this occasion was expressed by all. On Wednesday evening the members and visitors generally were invited to a theater party.

### Discussions.

The programme of the convention did not provide for formal papers or addresses, but presented to the merchants a variety of topics of practical interest, the discussion of which was to be briefly opened by members. It was not found feasible to consider all the subjects thus designated owing to the pressure of other business or the fact that some of those appointed to open the discussions were not on hand to do so. The following are the ques-

How do you advertise, and what results do your present methods bring?

Getting unsalable goods out of your stock. Should our members have a Hardware exchange?

Our relation to competitors in the same town.

Buying right enables to sell right.

What do good roads mean to us? Are we doing our part toward getting them?

Special sales and bargain days.

Getting articles that are good sellers between seasons.

How can we help the general trade by advising the trade papers what is going on in our section of the country?

The association is certainly to be complimented on the manner in which the various questions brought up were discussed by the members, with practical suggestions which could not fail to be of use to those desirous of conducting their business in the most approved manner. President Ridge appropriately referred to the deliberative sessions as a school of education in the Hardware business, the place where the convention met being the theoretical room, while that across the way where the exhibits were made was the room of demonstration.

### The Exposition.

The management of the exhibit feature of the convention was admirable. At its opening on Tuesday, February 9, the exhibits generally were in place and ready for inspection, the booths and enclosures of the various exhibitors showing much individual attractiveness and a skillful use of the space allotted. As far as possible, the merchants were excluded from the exhibition hall while the sessions of the association were in progress, but the attractions of the display and the dominance of the business spirit rendered some members irregular in their attendance.

The exhibitors generally expressed themselves as well satisfied with the result. A good many orders for goods

were placed. The large number of vehicles and implements displayed indicated the prominent place this class of goods holds in many of the country stores.

One of the booths which attracted much attention was that of the Coldwell Lawn Mower Company, Newburgh, N. Y., whose representative, E. B. Standart of Chicago, was unremitting in his attention and in the courtesies which he extended to the merchants. An antiquity of peculiar interest was an early type of the Coldwell Lawn Mower. This machine was made in 1858, and is treasured by the company as an example of one of the first Lawn Mowers manufactured. It possessed especial interest from the prominence of Thomas Coldwell, the founder of the company, as an inventor and manufacturer of Lawn Mowers, and one who had great influence in their development.

The exhibit of the Union Metallic Cartridge Company, New York, which was in charge of S. M. Smith, had a conspicuous, central location and was attractively arranged and commanded much attention. Mr. Smith and his assistants were constant in their courtesies to the merchants, to whom they were able to give much useful information in regard to the products of the company and the use of ammunition generally.

Fred McFawn of the E. L. Watrous Mfg. Company, Des Moines, Iowa, in connection with the representation of the products of his company, gave out many souvenirs



BEN F. RIDGE.



D. C. PATTERSON.

in the form of a pan lifter, which were much sought after.

#### Freight Matters.

The discussion which resulted from the paper on freights by M. J. Cameron of Inola, who was unable to be present, was an illustration of the advantage of a brief but clear presentation of a subject which called out further expressions from the members. While the merchants of the State apparently have reason for complaint in regard to the service they are given by the railroads in the matter of freights, the point was emphasized by several merchants, who have evidently given intelligent attention to this department of their business, that the reason for delay in settlement of claims against the roads on account of overcharge or damage of goods is generally because the claim is not properly presented. The following extracts from remarks of different members will indicate how the subject was regarded:

**FREDERICK PFAFF:** In regard to collection of damages. I am of the opinion that delay is not so much the fault of the railroads as the fault of the merchants in preparing claims. I had trouble at first, but not since I found out how to make our claims. I have not had a delay to exceed five days in about a year. If some of our friends would spend the time and care in getting up their claims that they spend in denouncing the railroads they would achieve more. The fault is often with the jobber in making out the bill of lading. Some goods take a cheaper rate, knocked down than set up, and if care is not exercised the higher rate will often be charged.

**A. W. McKEAND:** It is the way you present your claims in nine cases out of ten. We are going to request that the merchants who are members of our association when they cannot get rapid adjustment, take the matter up with the claim department in the city where they bought the goods. If you bought the goods in Oklahoma City refer the claim

to the department here; if you bought the goods in Wichita refer it to the department there.

**T. T. EASON:** Some jobbers have a system under which they mail an invoice of the goods and along with it a card which the merchant is asked to sign and return as soon as the goods are received. In case of serious delay the jobbers take it up with the traffic department.

**GEORGE LARIMORE:** I believe the railroads mean to do what is right. The matter is often the fault of their employees, as it is frequently in our own business. I recently had a shipment come in of Gas Stoves. The crate looked all right. There was nothing on the outside to indicate that anything was broken or wrong, but upon opening we found a number of Stoves damaged. I called the inspector in and had him examine the goods. He saw that the injury was the result of careless handling and said to me: "Go ahead and file your claim and we will pay you." I got the matter settled in less than six weeks. This is my usual experience.

#### Secretary Patterson's Report.

The annual report of D. C. Patterson, Oklahoma City, secretary, was in part as follows:

In planning the programme for this year, we have followed the suggestions of a number of dealers and have arranged to have short talks, so that each dealer present may have an opportunity to take part in the discussions and make himself a part of the meeting. Heretofore, too much time has been given to lengthy addresses, which, while interesting and instructive, kept us from getting down to active business in which every man present could take part. In other words, we are going to do things instead of say things at this meeting.

#### Clerks and the Association.

The question has been asked "Can a clerk become a member of the association?" This reminds us of the fact that, as the success of a Hardware store depends largely on the interest that the clerks take in the business, we would all profit if our clerks had time to attend the meetings and get the benefits of the expressions of the successful dealers of the State. One man writes that he cannot attend this year, but is sending his clerk to get some points.

#### Trade Journals Helpful.

As a means of education and of keeping up the interest in association work, the trade papers have been invaluable to us. It is the good fortune of your secretary to receive most of the trade papers regularly, and there is never an issue but that contains helpful suggestions along lines of conducting a Hardware store or making a State association more beneficial to the trade at large.

#### Legislative Committee.

For the most part, the appointment of a Legislative Committee each year has been a mere formality. Now it is time that the appointment of this committee should mean business, and immediate business. Laws are being proposed to the Legislature and Congress that would be detrimental to the Hardware trade and to the general business welfare, and I trust to have the co-operation of a Legislative Committee who will be able at our next convention to bring up a report showing that something of importance has been accomplished.

#### Work for Local Clubs.

Our local clubs have not done the work in 1908 that they did the previous year, at least we have not been advised as to what they are doing. Right now there is a big work for the local clubs to do, and there should be one in every town in the State. Here is the work:

The reprint from *The Iron Age* gives to the dealer the best outlay of facts on the parcel post proposition, but as one of the active members suggests, this information is for the dealer. The man who needs to be educated on the subject is the farmer. How better could it reach the farmer with the facts than through your local newspaper? Then let every dealer present digest the information in this pamphlet, take it home with him, talk it to the other dealers, whether they be Hardware dealers or music teachers, organize a club of local merchants, go to Mr. Local Editor and say to him: "We, the people of this town, who are supporting your paper by our advertising, humbly request and graciously suggest that you run a series of articles that will show what would be the ultimate result of a parcel post system of any kind."

#### Complaints and Grievances.

Much to the regret of all fair minded dealers who are familiar with the circumstances, a certain retail dealer had one of our most active friends, representing a jobbing house, arrested last July for selling Buggies without paying an occupation tax. There was no just ground for complaint against this gentleman, for your secretary made a thorough investigation and learned that the commission on the sale of these Buggies had been given to the last agent.



Here let me say that your secretary is always ready to investigate any complaint you may have against trade abuses, but in presenting these complaints, in justice to yourselves, your association and to those against whom the complaints are made, please make it a point to accompany your complaint with definite and authentic information, so that the adjustment of your claim can be handled intelligently. I would like to believe that on account of there being so few complaints registered, there is little cause for complaint against them. But I feel that some of you neglect to call attention to these things at the proper time, if at all. It was the result of the combined efforts of the associations that the Carriage Manufacturers' Association went on record recently as being opposed to their members selling samples at fairs and exhibitions. The jobbers are our friends if we meet them half way. However, if we pay no attention to them, they may not pay any attention to us.

#### Active Interest of Members.

Your State Association has been criticised on account of its appearing to be a two-man proposition—that is, that it has been controlled by two or three dealers who handled matters to suit themselves. My experience with this association proves that what brings about such criticism is the fact that the majority of the dealers do not take as active an interest in the work as they should, so that it is all left to the officers to use their best judgment, and they do not get the benefit of the opinion of a sufficient number of members.

#### Keeping Up Stock.

M. C. Hale, Tulsa, spoke on what he calls his hobby, keeping up stock. The way to fight the catalogue houses is to keep what people want. He emphasized the fact that in his opinion Hardware merchants miss enough sales by not having what people in their communities call for to make a good living, if they had had these articles for sale when asked for.

He spoke of the advertising that is done to get people into a store and the waste involved from not having the goods that are wanted and that rightfully belong in the store. He mentioned the case of a wholesale house which regularly figures up what it loses by not being in a position to furnish what merchants had ordered from them. This was found to figure up a very large sum.

Mr. Hale advised the merchants not to buy too large quantities of goods because they are cheap, but rather to spend the money in securing a stock of many little things not usually carried, but frequently called for, which reasonably belong in the store. A well assorted stock suited to the requirements of the people and frequently replenished is the principle to be followed in a Hardware store.

#### Fraternal Relations.

The growing movement of having an interchange of delegates between the various State associations found another illustration in the Oklahoma meeting. The National Retail Hardware Association was represented by E. E. Mitchell, ex-president of the Arkansas Association, who was present to take the place of M. L. Corey, who was attending the Pennsylvania meeting. Arkansas was represented also by W. L. Harlan, secretary of the State Association, and New York by R. R. Williams, Hardware editor of *The Iron Age*, who was present as a delegate from the association of that State. All these gentlemen were most cordially received and participated in all the deliberations of the meetings.

Mr. Mitchell read the following resolution which had been adopted at a meeting of the Executive Committee of the Arkansas Association held in Little Rock on January 28 last:

That we extend to the members of the Oklahoma Association an invitation to attend our next annual convention at Fort Smith, Ark., the latter part of June, the date to be decided on later, their secretary to be notified in ample time to advise the members of the Oklahoma Association in due time to be with us.

A pleasant feature was the receipt of a telegram from Frank A. Bare, secretary of the Ohio Association, tendering greetings and good wishes, to which an appropriate response was wired. A telegram of greeting was also received from the Norvell-Shapleigh Hardware Company, St. Louis.

#### Legislative Committee.

The general subject of legislation in its relation to business interests was frequently referred to in the discussions. A part of the regular working machinery of

the association is a Legislative Committee, but it would appear that comparatively little has heretofore been done by it.

In view of the important bearing of some laws passed by the State Legislature on business matters, and the fact that at the present time legislation which would be detrimental to the Hardware trade and to general business interests is proposed both in the Legislature and in Congress, it was intimated that the existing committee in this field has work to which it may advantageously give careful attention.

#### Dead Stock.

The question as to the getting rid of dead stock was opened in a brief address by Fred W. Palmtag of Talequah. He stated that with unsalable goods on hand it was his custom to offer them at a price that will cover cost; if this does not move them a still lower price is made, as it is with him a fundamental principle to get rid of such goods. His experience has been that most of his unsalable goods come from specialty men who induce the merchants to handle the line so as to secure the sale of it in their territory. The experience of merchants generally seemed to be that it is better to let such opportunities alone.

There was some discussion in regard to the feasibility of having something in the line of an exchange by which merchants having an oversupply of certain articles could dispose of them to others. Nothing definite was determined along this line.

#### Educating the Farmers in Regard to Parcel Post.

The Oklahoma association has been exceptionally active in inducing members to communicate with their representatives in Congress in regard to the dangers attendant upon the parcel post projects which have been so much discussed. A large number of *The Iron Age* reprints of matter relating to the carriage of merchandise in the mails were distributed and resulted in awakening much interest among the trade, and in the sending of many opposing petitions to Washington.

The point was made by the secretary in his admirable report that while these reprints give to merchants a most complete presentation of facts and arguments, their circulation in commercial circles does not provide for the education of the farmer, whose first impulse is often to favor the parcel post. It was, therefore, suggested that the merchants in the different towns get together and present the matter to the local editors that they may become familiar with the subject in its bearing, especially on the interests of the commercial classes.

#### Local Organizations of Business Men.

This subject was forcibly presented by A. W. McKeand, secretary of the Chamber of Commerce, Oklahoma City, who made an interesting address. He was desirous of promoting the formation of local clubs in which all the merchants of the town should be brought together to take such action as would be advantageous to the business interests of the place. Concert of action among the members in the same line is thus secured and much in the way of unreasonable competition avoided.

R. R. Williams of New York pointed out the manner in which these organizations would be useful in opposing such projects as parcel post, in determining which the wishes of the merchants throughout the country would have much weight doubtless if given emphatic expression. Such clubs as Mr. McKeand was advocating were referred to as also especially useful in the matter of credits.

#### The Merchants' Relations with the Press.

In his address on "Advising the Trade Press," A. G. Ingle made the excellent point that if a merchant finds something which is of value to him in his business he should be willing to make it known to his brother merchants, provided always this would not be to his own detriment. For disseminating such information the trade papers are the proper vehicle.

Difficulties encountered in business might be presented to the trade journals with the probability that a solution or at least practical suggestions might be brought

out. The point also was made that in the rush of business many merchants neglect the reading of their trade papers.

In the discussion of this question W. A. Jones of the *Implement Trade Journal* made an interesting address, seconding very heartily the suggestion that the retail merchants communicate freely with the trade press, to whose independence and public spirit he paid an appropriate tribute.

#### Good Roads.

The importance of having good roads was recognized by the convention and various means of securing them with the aid of suitable legislation were suggested. Reference, too, was made to what merchants can accomplish under existing conditions, especially if they move unitedly and energetically in the matter.

The Putnam law, now before the Legislature, was formally approved by the association. One of its provisions is that prisoners are to be put to work on the roads instead of being confined in the penitentiary.

#### Cultivating Dairy Business.

The opportunities afforded by attention to the interests of the dairy business were discussed in a practical way by J. W. Powers, Orlando. His paper, which was listened to with much interest, beside containing the narration of his own experience and success in connection with the sale of Cream Separators, emphasized the fact that Oklahoma is a great dairy State and that many merchants have the opportunity to build up a profitable business in the line of Dairy Appliances and Supplies.

The paper, which is given in another column, well deserves perusal by merchants of other States beside the one to whose conditions it especially relates. It called out one of the most interesting discussions of the convention.

One member made the point that merchants should encourage diversity in products among the farmers and should educate them along lines which would be profitable. New appliances should be presented to them with instruction in regard to their use. Other members referred to the poultry and dairy business as being especially profitable to the farmer and as possessing the further advantage, from the standpoint of the merchant, that they put the farmer on a cash basis.

#### Motto for Hardware Store.

In response to the call made for the best motto for a Hardware store, several were submitted by the members. As the result of a vote the following, handed in by M. C. Hale, was chosen as the best, and to him the prize was accordingly awarded: "This Store Stands for Quality, Square Dealing and Courtesy."

#### Parade of the Exhibitors.

The weather after the cold of Tuesday was, on Wednesday and Thursday, all that could be desired. The sun shone warm, the air was clear and bracing. The spirit of the day seemed to have taken possession of merchants and exhibitors in the Exposition Hall. All was life, smiles, cheer. The exhibitors quickly responded to the suggestion of a parade around the interior of the building, each man to carry something suggestive of his exhibit. So, headed by E. B. Standart, representing the Coldwell Lawn Mower Company, and carrying on his shoulder a modern Mower (not the venerable one on exhibition), the parade started. Quickly all fell in line, each man carrying an emblem of his business. The E. L. Watrous Mfg. Company was in line in the person of Fred. McFawn, carrying a model of a Screen Door and Latch. The Whip men, the Stove men, and manufacturers and jobbers in other lines were represented. The men sang "We're Here, Because We're Here," and other songs appropriate to the occasion, and then in a body marched over to the Hall of Agriculture, where the merchants were already getting in line for the second day's session. They took possession, marched up on the platform and sang, and then departed, leaving cheer and smiles behind.

#### Range Peddlers.

As a means of educating the farmers against the Range peddlers, one of the members spoke of the need

of educating one's trade in regard to the goods carried in stock and their merits. It is a good thing, he said, to show a man a Range, tell him its good points, inform him in regard to prices of the different grades, and show him that you have goods better than any which the Range peddler can offer. The probabilities are that if this education is carried on in the right way the Range man will not make a sale when he comes to such well instructed customers.

#### Relations with Employees.

In connection with the forcible address of M. C. Hale, president of the Hale-Reynolds Hardware Company, Tulsa, the following hints to clerks were presented to the association in printed form. They are used by his house, posted conspicuously in the store. In an inoffensive way they call attention to things which employees should give heed.

##### HINTS TO CLERKS.

1. The clerk who finds nothing to do, simply isn't looking for work.
2. A clerk's spare time should be spent in arranging and cleaning the stock.
3. The clerk who watches the clock will never make a success.
4. Clerks should start toward a customer the moment one enters the store. The customer should not have to hunt up a clerk.
5. Clerks should not smoke during business hours. It is offensive to all ladies and some men.
6. Clerks should not loaf in front of the store. It obstructs the show window and is a poor advertisement for the business.
7. A clerk who isn't capable of selling any article in the store is not a full-fledged clerk, merely an assistant.
8. A good clerk can very nearly earn his salary by selling goods the customer doesn't call for.
9. A good clerk will do even better when his employer is out than when he is in.
10. A clerk is either honest or he is a thief.
11. The clerks' position is an important one, and the success of the business depends largely upon them.

#### Election of Officers.

In accordance with the report of the Nominating Committee, the following officers were unanimously elected for the coming year:

PRESIDENT, M. C. Hale, Tulsa.

VICE-PRESIDENT, Frederick Pfaff, Anadarko.

SECRETARY-TREASURER, D. C. Patterson, Oklahoma City.

DIRECTORS: T. T. Eason, Marlow; F. W. Palmtag, Tahlequah, and C. W. Spangler, Mulhall.

Ben F. Ridge was elected as a delegate to the National Implement & Vehicle Association. Frederick Pfaff will represent the Oklahoma Hardware Association at the meeting of the National Hardware Association at Milwaukee, May 25.

Ben F. Ridge was a most excellent presiding officer, holding the convention well in hand, and prompt, courteous and wise in the discharge of his duties. His successor, M. C. Hale, who has been actively identified with the work of the association from the first, is held in very high regard. He is a thorough merchant, taking a broad view of business questions, with a high ideal of association work. It is anticipated that his administration will be notably successful in advancing the interests of the organization.

Secretary-Treasurer D. C. Patterson was naturally re-elected, as he has been a most efficient officer. His enthusiasm in the work, his painstaking attention to details, his attractive personality and ability, render him admirably qualified for the office.

#### Resolutions.

The Committee on Resolutions, through its chairman, Fred. W. Palmtag, reported the following resolutions, which were unanimously adopted:

- Resolved, 1. That we extend a vote of thanks to the Oklahoma State Fair Association for the use of the buildings and grounds and for the interest taken in the work by the Fair management.
2. That we extend our thanks to the exhibitors who have done so much to make this meeting a grand success.
3. That we appreciate the attendance of E. E. Mitchell, Morrilton, Ark., who was the official representative of the National Hardware Association.
4. That we also appreciate the kindly interest taken in our work by the Arkansas Association in sending W. L. Harlan to our convention.



5. That we thank R. R. Williams of *The Iron Age* and W. A. Jones of the *Implement Trade Journal* for their attendance and interest taken in our meetings.

6. That we extend our thanks to the Jobbers and Manufacturers' Club for their splendid entertainment.

7. That we deplore the fact that out of something over 200 dealers of the State who are in attendance, such a small number have taken an active part in the business sessions of the association.

8. That it is with great sorrow that we learn of the death of F. M. Spangler, Mulhall, Okla., who has always taken such an active part in the work of the association in the past. We feel that his presence is greatly missed from the meetings.

9. In closing we wish to thank the outgoing officers, and especially our secretary, for their untiring efforts to uphold the association.

10. That we are heartily in favor of the good roads movement headed by I. M. Putnam.

#### Accounting in the Hardware Store.

The importance of proper accounting or bookkeeping methods in the store was emphasized in two papers presented at the session on Wednesday. One of these was by T. T. Eason of Marlow, whose admirable paper is given on another page.

This paper was followed by an interesting talk by Geo. Larimore, Oklahoma City, who gave some personal experience as well as suggestions. His subject, "Modern Methods in a Hardware Store," he stated, was a large one and must be broad enough to cover stocks of \$200 to \$100,000, and those stocks located in largely varying fields. Among other things he said:

I have made a careful study of stores, and prefer getting my information from them rather than from trade papers, although many good feasible ideas are found in our papers, and I would not be without them. I am convinced that system should be carefully adhered to, and owing to size of stock, amount of business done, and its location should govern. It should be short and complete in detail. I think it almost as easy to over systemize as it is to overstock, and we must be careful, and know we are right.

#### Profits for the Day.

In my own store I have a system of bookkeeping whereby I can tell in the evening my profits from the day's business, and while I cannot tell my actual expense (for the reason that there always are losses arising from that day's business which will not appear until later), yet I can get close to the real thing by the monthly expense account, and usually 10 per cent. for lost bills. I believe it is of vital importance for every merchant to know this, that he may be able to correctly proceed.

I use a loose-leaf ledger, a cash book, a charging machine (which makes three copies), and cash tickets. In all entries I must have itemized entries, but cost may be placed thereon in a lump sum, to be checked by bookkeeper, and always in our cost mark. The system is good, and quite satisfactory to a business doing \$30,000 to \$75,000.

#### Pointers from and to Salesmen.

Store management is another department for system. Let it be understood that salesmen are expected to work. I ask a salesman often: What are you doing, and why are you doing it that way. I often get ideas as well as give them, and it is well to talk over together different ways and means. It was cold yesterday morning, and at 7.30 I entered the store and found a recruit employee straightening up the cartridge stock and another working on screw stock. The first was starting at right side of shelf with 22's and working to left with increasing sizes. I asked why. He said just because he always had done it that way. Now, I said, Look at this man's stock of screws. It reads like a book, from left to right. He saw the advantage, and put his stock in same shape, which is a very great advantage in large stocks.

#### Make the Store Attractive.

I would not discourage display cases, for there are many goods that ought to be so displayed to be successfully handled. Tools especially. Utilize every space and corner, and make it a thing of beauty and joy, and it will be dollars in your purse. Carefully guard tools from rust and finger marks. Wash up cases; keep show cases dressed, and in order, and use floor oil. The latter is just the thing for Hardware, and makes things look clean, keeps all dust down, and don't forget to use paint. It is just a trade getter. In other words, keep things shining, and you will hear the remark come often, "Gee, that store looks so neat and tidy, I like to go in there."

#### Other Suggestions.

Now one more point. Inspire confidence in your customers. Treat them all alike. They know you must make a profit to live, and it is your duty to get it. Don't make one article carry a loss for its neighbor. Buy in small quantities, and buy often. Small errors are easier rectified, and you will have less bad stock on hand. Be fair with your jobber. Tell the truth, and you have covered lots of trouble and made dollars go further in purchase power.

An interesting discussion resulted in regard to this general subject, and the members expressed their conviction of its importance, and at the same time gave practical suggestions in regard to methods which they found advisable. In connection with the desirability of a good system in accounting the importance of having a well arranged store and systematic and careful methods in every department was also mentioned.

Mr. Patterson, the secretary, spoke of the lack of business methods shown by many merchants, and mentioned one case in which a merchant had been unable to pay his creditors, and when called upon for a statement had been unable to furnish it because he had not kept any books. The consequence was the jobbers had to employ a man to go over matters and find out if he was really involved or simply overstocked.

#### LIST OF EXHIBITORS.

Following are the names of exhibitors at the convention and the persons by whom they were represented:

UNION METALLIC CARTRIDGE COMPANY, New York: Samuel M. Smith.  
COLDWELL LAWN MOWER COMPANY, Newburgh, N. Y.: E. B. Standart.  
E. L. WATROUS MFG. COMPANY, Des Moines, Iowa: Fred McFawn.  
PERU-VAN ZANDT IMPLEMENT COMPANY, Wichita, Kan.: J. A. Hartow.  
SHINN POOL CABLE COMPANY, Oklahoma City: J. R. Pool.  
EXCELSIOR STOVE MFG. COMPANY, Quincy, Ill.: J. H. Wilson.  
BUICK AUTO COMPANY, Flint, Mich.: John McClellan.  
T. R. JAMES & SON, Ft. Worth, Texas: Harness, Saddles, Robes and Dusters.  
CHESNUTT LOADING TRUCK COMPANY, Oklahoma City.  
A. M. MEAD, El Reno, Okla.: Wagons and Buggies.  
SMITH MFG. COMPANY, Chicago, Ill.: J. H. Smith. Gas Engines, Cream Separators, Spreaders, &c.  
OKLAHOMA CITY HARDWARE COMPANY, Oklahoma City, Okla.: E. E. Everett, V. D. Rigeway, H. D. Gupton, Fred. Bell, W. J. Parker.  
STANDARD SEWING MACHINE COMPANY, Cleveland, Ohio: F. M. McInnis.  
NATIONAL WHIP COMPANY, Wakefield, Mass.: R. H. Smith and C. W. Brown.  
KOKOMO STEEL & WIRE COMPANY, Kokomo, Ind.: B. S. Smith.  
HIAWATHA MFG. COMPANY, Hiawatha, Kan.: J. S. James. Washing Machines, Incubators and Brooders.  
U. S. CREAM SEPARATOR COMPANY, Bellows Falls, N. Y.: J. R. Gish and S. R. Hull.  
HEN FEATHER INCURATOR COMPANY, Blackwell, Okla.: O. M. Swain.  
BUTLER MFG. COMPANY, Kansas City, Kan.: R. L. Roberts.  
RICHARDS & CONOVER HARDWARE COMPANY, Kansas City, Mo.  
MCFARLAND CARRIAGE COMPANY, Connerville, Ind.: B. M. Barrows, A. H. McFarland, A. Dicksee.  
A. & G. AUTO COMPANY, Oklahoma City: Ray Colcord.  
CITIZENS' MOTOR CAR COMPANY, Oklahoma City, Okla.: Charles Newman.  
BROWN MFG. COMPANY, Zanesville, Ohio: Geo. W. Bob. Wagons, WOODBURY WHIP COMPANY, Rochester, N. Y.: W. C. Bentley.  
WALKER MFG. COMPANY, Council Bluffs, Iowa: A. F. Hollis. Disk Furrow Opener.  
BELLEVILLE STOVE & RANGE COMPANY, Belleville, Ill.: L. Webb.  
J. C. JEWETT REFRIGERATOR COMPANY, Rochester, N. Y.  
KANSAS CITY PUMP COMPANY, Kansas City, Kan.: A. D. Martin. Sampson Windmills.  
DELAVAL CREAM SEPARATOR COMPANY, Chicago, Ill.: J. T. Wheaton, J. G. McNaught, C. E. Corbin, J. H. McCarthy.  
DEMPSTER MFG. COMPANY, Beatrice, Neb.: J. T. Richey.  
OLDS GAS POWER COMPANY, Lansing, Mich.: J. H. Young.  
J. H. HARTMAN, Chickasha, Okla.: Human Stalk Cutter.  
J. W. MOON BUGGY COMPANY, St. Louis, Mo.: Charles Adams.  
MOON BROS. CARRIAGE COMPANY, St. Louis, Mo.: C. P. Eberly, H. R. Menefee.  
BANNER BUGGY COMPANY, St. Louis, Mo.: H. B. Hinton, F. A. Moore.  
GALENA HARBOR COMPANY, Galena, Kan.: P. Wm. Roster.  
JACOBSON MACH. MFG. COMPANY, Warren, Pa.: E. L. Benedict.

#### HARDWARE ACCOUNTING.

BY T. T. EASON, MARLOW, OKLA.

I consider this one of the most important subjects that will come up before this convention for discussion. And, furthermore, it is most important in the organization of any business. I have given this department of my business more study than I have all the others combined. I have worked hard to improve my methods along this line. I have succeeded to a certain extent, but am not yet satisfied. I expect to continue studying the methods of the most successful merchants of this country. Some three years ago I had our worthy secretary come down and go over my business to see if he could not make some suggestions for its improvement. He gave me some ideas that I have found to be of great benefit. Since that time I have made some improve-

ments that have been worth more to me in the way of enlarging the profits of my business than anything I have done. One of them was to buy a multiple drawer cash register. I have a machine that has six individual drawers, this gives me a drawer for each clerk.

#### Sale Slip for Every Sale.

Another thing I require of each clerk, to make out a sale slip for every sale, whether it was a charge or cash sale. When these slips are placed in the register a record is made at the same time of the sale on the detail slip in the machine. At the close of the day each clerk goes to the machine, takes out his sale slips, foots them up and enters them on a slip called "Clerks' Daily Statement." In case his cash does not correspond with his cash sale he is required to make notation of same on his daily statement. After he has made up his cash he puts all the sale slips, together with his cash in a pocketbook in his drawer of the register, which is there for that purpose.

After the clerks have all made up their cash, the bookkeeper goes to the register, takes off the detail slip and checks each clerk's business with this slip. By this method I find the clerks are more careful. They know if they make any mistakes during the day that they will be detected when that day's business is checked up.

I also find that by requiring a slip to be made with every sale my clerks are not nearly so liable to forget to make charges. I also find at the end of the year that my per cent. of profits has amply paid me for the extra time that it takes to make these slips out. If there is any one here that is not following this plan, I want to say that if you will try it and do away with that old day book or blotter that you would not return to the old plan for anything.

#### After Each Clerk's Business for the Day

has been checked up by the bookkeeper, all the slips are put in the safe until morning, at which time they are taken out and posted to their respective accounts in a loose leaf ledger. In posting these saleslips to the ledger we are careful to note in the folio column of the ledger a letter designating the name of the clerk that made the sale. By doing this it makes it easy to refer to the sale slip should that be desirable at any future time.

After these sale slips are entered to the debit of their respective accounts in the ledger, we prove the entry by footing up all the sale slips for the different departments, and enter them to the debit and credit of the different accounts to which they belong, this entry being made on the journal. At the end of the month the totals of these columns are posted to the proper accounts in the ledger.

After the total of the sale slips are entered on the journal, they are carefully folded together with a detail slip statement, and the detail slip from the cash register and filed in a card index under the month and date to which they belong. At the same time we are careful to keep each clerk's sale slips separately, so if we have cause to refer to them to verify any entry, it can easily be done.

If an account was disputed I can look at the account and see that "A" sold the time disputed, and that it was sold on, say, January 23. I would go to card index file, take out the sale slips for January 23, run through them, and find A's slips, and if there had been a wrong entry made I would thus detect it.

#### Handling Cash Items.

Now, in regard to handling cash items. I never allow any cash to be paid out without taking a voucher for it, whether account is paid in cash or by check. If my dairyman brings up a shipment of goods, he brings the expense bill along with the shipment. We take the bill and check up the shipment. In case there is any breakage or shortage, I have it noted on the expense bill before I allow it paid. If this amounts to enough to justify a claim being filed, I have the expense bill to show with the breakage or shortage noted thereon. This, together with bill of lading, will be two important documents in favor of claim.

To these add a copy of your invoice, together with a bill for your claim, make a copy of same, and you have a claim complete. When you file same have the agent with whom you file it give you the claim number, make a note of it on your claim, and your claim is complete and ready to file away. I have a letter file in my desk that I use for these claims. Before filing away I make a note of the number of claim in my diary, which I keep on my desk. If I do not hear from the company at expiration of the time I have allotted for that, I write to claim agent, calling his attention to same.

#### Orders for Repairs.

In reference to orders for repairs: When any of us take an order for repairs, we do so on a small memorandum book used for that purpose. This book has perforated leaves that can easily be torn out. For illustration: If John Jones comes into my store and wants F 428 for his Cultivator, the clerk to whom he is talking makes a notation on the memorandum book like this: Order F 428 for (giving name of Cultivator) for John Jones, &c. This he will tear out and

lay on my desk. At some convenient time during the day I will order the repair, keeping a copy of the order, and file copies away in same file that I have on my desk for railroad claims, &c. When the piece and invoice comes in, I take copy of order, and pin it to invoice. If repair is not to be sent out, I notify party by mail that the repair for his Cultivator has come in and for him to call for it. Now, in marking the repair, I do so with a shipping tag, putting on this tag the party's name, the date he was notified, the price of the piece, together with the freight or express charge, as the case may be.

### GETTING BETTER FREIGHT SERVICE AND MORE PROMPT ADJUSTMENT OF CLAIMS.

BY M. J. CAMERON, INOLA, OKLA.

The subject of getting better freight service and more prompt adjustment of claims is one of vital interest to every dealer. In this day and age of competition and small margins of profit, the merchant who can deliver the goods to his customers promptly and in perfect condition has half the battle won in his fight for supremacy.

How many business men keep an accurate account of the losses sustained by slow delivery of goods, the breakage and damage to them in transit?

You may have ordered a Stove, it arrives slightly damaged, you hesitate to enter claim for so small an amount with the consequent delay owing to the red tape system that the railroads employ. You would rather make your customer a closer price and shoulder the loss. This is not right.

Is there a motive back of all this? Have the railroads purposely caused these long delays to discourage the merchant from entering claims where the amount involved is small? Keep an accurate account for a month, and see the loss sustained that you do not ordinarily take into consideration. It will surprise you.

#### Loss of \$50 to \$150 Annually.

I will venture there is not a dealer present who does not lose annually from \$50 to \$150 from this source, of which no account is taken. The average amount, if saved, would pay your taxes or the interest on \$1000 for a year.

For the nondelivery of special orders at a certain date, your customer refuses the goods. What can you do? The wholesale house has fulfilled its contract and you cannot afford to get their ill-will by refusing same. You accept the goods, and they lie on your shelves indefinitely or are sold at a sacrifice.

You place an order for your goods on which you are getting low in plenty of time to receive the new stock before the old is exhausted, but the goods are delayed a few days, a week or a month. You do not want to overstock by re-ordering, thinking your shipment will arrive any day. In the meantime your stock is exhausted and your customers are compelled to go across the street to your competitor, and very frequently he buys other articles of which you may be well stocked. You are disappointed yourself, your customer is disappointed and your loss is many times your regular profit.

#### Does the Railroad Company Lose?

Not a cent. They know they will get their money upon the delivery of the goods, whether that be next week or next year, and they are indifferent. This condition applies to a greater extent in towns having no competing lines.

These losses are caused to a great extent by the negligence of employees who have no interest except to draw their pay at the end of the month, poor equipment, incompetent officials, and last but not least, indifference of the patrons.

It will take concerted action on the part of this association and all other business associations and organizations of the State to overcome this condition.

Legislative action should be obtained to compel all local agents of the railroads to settle claims under \$25. Make it a misdemeanor subject to fine for any railroad employee to damage goods while in his possession, either by carelessness or neglect. Compel the railroads to remit part of freight charges on delayed shipments. Create a State board of claims, with power as referee, to adjudicate all questions where a monetary consideration is involved.

### BENEFITS OF THE DAIRY BUSINESS.

BY J. W. POWERS, ORLANDO, OKLA.

There has been and there always will be a great deal of discussion in our conventions as to means of doing away entirely with credit business, or at least to cut down the percentage of credit sales. Primarily, however, in doing this, I believe it is up to the individual dealer in his respective locality to analyze local conditions and if they meet with the success I have, or have similar conditions existing with which to put plans similar to mine into practice, it will be well worth the effort.

In the first place, you must all awake to the fact that Oklahoma, which five years ago was producing comparatively nothing, or at least not supplying even home demand in



dairy products, last year produced nearly \$1,500,000 worth of butter, and this over a comparatively small part of the State, and also that the industry is spreading rapidly, and while not exactly replacing staple crops, is taking its place among them.

The value of this industry to all mercantile lines is apparent when we figure that it produces cash in hands of the producer at every season of the year and where local conditions justify it means the erection of a local creamery plant and the addition of a business institution that is a business getter, a trade producer and a dividend payer, and extends the trade-drawing territory of any community many miles further than before its establishment.

#### **An Unpromising Community.**

I was located in what I presume to be as unpromising a community from an agricultural standpoint as any in the State, and five years ago actively took up the sale of Hand Separators, and here is the point I am driving at—that Implement and Hardwaremen, who are logically the ones to take up such lines, should grasp the opportunities afforded, not only that with earnest efforts the same as with other lines—the profits alone are worth striving for—but that the result as bearing upon this proposition of credit extension will surprise you.

#### **The Beginning of Dairy Business in Orlando.**

Some 10 years ago a cheese factory was started and run two years with rather poor success; cheese selling at 8 cents per pound, milk had to be delivered every day sweet. Then the cheese factory was turned into a skimming station, and the cream sold for ice cream. Prices paid were profitable, but during hot weather patrons living at a distance found it hard to deliver the milk sweet, and then the skimmed milk was always sour before they got home.

Next came shipping of the cream to central stations for butter making. Prices proved profitable, and the milk cow was showing her real merit in this great dairy State.

#### **Cream Separators Sold Number 200.**

Five years ago this spring a German came here from New York, and asked us to get him a hand cream Separator; we told him we had never seen one. We sold four that summer, and our sales to date in this vicinity number over 200. We find they pay us a good profit now, take but very little time to sell, and give but very little trouble, and, best of all, turn a credit customer to cash; what we are all looking for, and trade scattered all through the week instead of all Saturday afternoons, as so often happens where your trade comes from the farmer.

It takes time to work the dairy business up to this point, but our farmer friends when once interested don't do things by halves. Three years ago the Farmers' Creamery Company was organized for the purpose of churning this cream at home. They had 120 patrons last year, paid out \$28,000, and averaged \$240 to each patron. They have moved their creamery to a much better location, and expect 200 patrons this summer.

Don't you think you would like to have 200 farmers coming to your store twice a week during the year with the cash, especially in the cotton belt during June, July and August?

The butter has found a ready market and at good prices. The product has taken several premiums in the past year, which all goes to show that good butter can be made in Oklahoma.

My own experience has been that cash business directly traceable to the sales of hand Separators which I made has increased fully 30 per cent. and credit business dropped off, and any increase of business has been more largely on cash basis. Also that the sale of a first-class hand Separator breeds satisfied cash customers and holds them.

#### **This Bringing of Cash Into Your Markets—**

outside cash—can only result in bettering every local condition you have and in furthering any interest of this nature you can enlist the moral support of every legitimate concern in your town. The sale of a machine of such good standing that you can sell it year after year and be assured of satisfied customers and profit bearing investments for them is only a hint, and stated as one basis for the success of the efforts put forth.

To sum it all up, Oklahoma is a great dairy State. Talk the hand Separator to your customers. Their sale will pay you a good profit and develop the resources of your community as nothing else can do. Get your customers interested in the dairy business. The agriculturist tries to make two grains of wheat grow where one grew before. Any hand Separator will save 2 lb. of butter where you got one before, and some will save three.

Go home from this convention with this resolution: I have quit talking parcel post to my customers—you may write your Congressman if you wish—say as little about the mail order houses as you can, and teach the people the advantage to be gained by taking good care of the cow and her milk. Washouts and hailstorms do not affect the steady

income from the cow. For seven weeks in the spring some of our customers never plowed a single row of corn or cotton, but the cream check came twice a month. I firmly believe you will all be wearing brighter faces and have more confidence in Oklahoma than you ever had before.

### **RELATIONS BETWEEN MERCHANT AND EMPLOYEE.**

BY M. C. HALE, TULSA, OKLA.

This subject appeals to me as a practical one and one which we have to solve often in our business experience. In the larger retail stores the selling end of the business is left largely with the clerks, therefore the success of the business depends largely upon them.

How can we get the most out of our employees is the problem that confronts us. It seems to me that the employer and employee form one large family, working with a common cause, the employer being the directing head. No business can succeed as it should unless the employees take an interest in the business, put their shoulder to the wheel and work together in perfect harmony for the advancement of the firm.

#### **Handicaps to the Business.**

During the years I spent as traveling salesman I found many cases where this lack of harmony was fatal to the business. A jealousy among the clerks, a lack of respect for the employer and an indifferent interest in the business are all serious handicaps for the success of the business. I believe the trouble with some of us is that we don't take our employees enough into confidence, that we are indifferent to their opinion pertaining to the business, are quick to correct them when they make a mistake, but slow to praise when praise is due. Nothing helps a clerk so much as to receive praise when he has made a good sale or brought a new customer to the store.

#### **Suggestions from Clerks.**

We are all human and appreciate worthy praise. I always talk over with my clerks the advisability of adding new goods to stock and the general policy of the business. Some dealers may think they cannot learn anything from a clerk, but this is not so. I have in mind one of the largest wholesale houses of the country, one whose business system is as nearly perfect as brains can make it, who place boxes throughout the house and agree to reward any employee who drops a suggestion into the box which would prove of value to the firm. I have been told that this firm has received some valuable suggestions in this way for the improvement of their business methods. One especially was received from the elevator boy which proved a most valuable suggestion and was put in practice.

Our employees must be made to believe that they are a spoke in the wheel of progress; that they are, in a sense, a part of the firm and that the advancement of the firm will mean their advancement. Poor clerks are dear at any price. Even one poor one, when the balance are good, has an evil effect upon the whole force. I claim that a clerk who can't keep busy all the time is not looking for work, and a good clerk can nearly earn his salary by selling goods the customer does not call for.

I believe it a good plan to encourage clerks to read trade journals. They can be benefited as much as the dealer by this class of reading.

#### **We Should Be Frank With Our Employees**

if they do something wrong. Correct them on the spot and praise them for the good things they do. I believe some merchants make the mistake of not teaching the clerks what they themselves know about the business, but let them drift along and kick because they can't handle the business as they should. You will often find a store where only a part of the force can sell to advantage any article in the store.

For instance, how many clerks know how to sell Stoves? This was brought to my mind quite forcibly one time several years ago when a customer came in to buy a Gas Range. The clerk who waited on him knew so little about the Stove he was trying to sell that the customer left the store in disgust. He told me afterward that that little experience probably cost me several hundred dollars' worth of his business as he got started trading with my competitor when he had intended to give me the business.

We all spend more or less money each year advertising our business, but our greatest advertisement is a complete stock of goods and a bunch of congenial clerks who are working in perfect harmony with their employer.

### **WORKING FOR GOOD ROADS.**

BY S. B. FRAZEE, VINITA, OKLA.

To me this subject means much, and certainly it has a broad meaning when it comes down to the Hardware trade of the country, and as well it means much to all merchants in every line and to every person in the whole country.

There is nothing, in my mind, that will benefit this State and this country as much as will a system of making good

roads and keeping them good. I believe the attention of every one should be directed toward the making of good roads. We fellows striving for a living by selling Hardware in the country towns, or I might say in the towns that are depending upon the country trade, cannot think of one thing that means more to our trade than good roads. There cannot be too high an estimation put on the value of good roads to any town or community. Some may differ from me on this, but I can assure you that I am a firm believer of this fact.

Now some of you may think from the way I speak that I am from a town that depends entirely upon country business, but I can assure you I am not. I am from the best city in the great State of Oklahoma. As I heard a toast-master say a few nights ago, "I live in the best town in the best county, in the best State in this great United States." I depend upon all classes of business.

#### Effect on Customers.

A saying that I hear often and sometimes from merchants is a good illustration at this time: "What don't come to-day will come to-morrow." Is this true? No, it is not true in any sense of the word, but you will find it more true when it comes to town business than country business, and I believe this is more on account of roads than the weather or anything else. I can cite you a few instances where I know I have lost a customer through his not being able to get to town on a particular day on account of bad roads, or I might say impassible roads, and of course there are many sales lost in the same way that we never know anything about.

Only a few days ago one of my customers from the North said to me: "Sam, you missed the sale of a Studebaker Wagon to me a few days ago on account of the roads being so bad that I was unable to reach Vinita, and had to go to Edna, Kan., for it." Of course, in this case what was my loss was a Kansas merchant's gain, but nevertheless, I missed the business on account of the roads. What do they mean to us? What are good roads for?

Good roads at all times would without doubt protect us on many a sale that we do not get to-day because that customer, intending to buy to-day, would not be able to reach us. I repeat again, if you please, that there is nothing that means more to us than good roads; there is nothing that affects as many merchants as the roads, and good roads will help all and give us a more steady business every day in the year.

I hope this association will go on record by instructing its Resolutions Committee to draft a resolution favoring every move toward improving the roads of this grand and good State and furnish a copy of this resolution to the proper committee at the Legislature at Guthrie.

#### Are We Doing Our Part Toward Getting Good Roads?

Now, my fellow Hardware merchants, this is where the question is put directly to us, and I am sure that there is not one here who would say yes to this question, but I will venture to say that there is not one in 20 that has even so much as thought very much about it any more than to encourage some trustee or road commissioner to buy a bunch of Scrapers or Shovels and other things necessary for them to have in order to work the roads.

How many have appealed to their county boards to do what they can toward building roads?

How many have appealed to the trustees all over your county to do all they could toward getting the roads in their districts in good condition?

How many have encouraged the Road Commissioners, who only get a very small pay for their services, in building the roads?

How many have appealed to their Senators and Representatives to see if some sane legislation couldn't be had for good roads?

These are the things that in my judgment should be looked after. I don't believe as one of the representatives in our Legislature does, that we need a lot of high salaried engineers, in order that we may have good roads.

I don't believe that there should be a law forcing a heavy tax on some one who is not able to afford it, in order that some fellow who doesn't pay any taxes might have better roads to travel over, as does one of our representatives.

I don't believe in macadamized roads across the State in each direction as one of our representatives in the Legislature does, but I do believe in some sane legislation that will give us good roads.

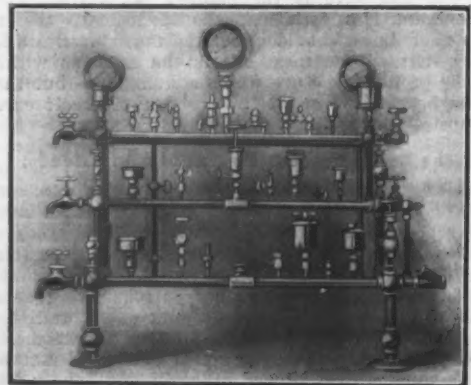
Now the question is, "What can we do to promote this and get good roads?" I don't feel that I am competent to say, and I don't believe that any man does, but I do believe that it is every man's duty to do all that he can with the proper officials to get a law that will build and work our roads.

Hager Bros., Ft. Atkinson, Wis., have sold their stock of Hardware to the Stoughton Hardware Company, Stoughton, Wis., which has removed it to that place.

## AN EFFECTIVE METHOD OF DISPLAYING BRASS GOODS.

A HANDSOME and striking display of Steam, Water and Gas Brass Goods may be made by setting up an assortment of such articles on racks made of lengths of iron pipe set up and fitted together in a workmanlike manner, as shown in the accompanying illustration. The goods should be affixed in positions similar to those which they would occupy in actual use.

The firm of Johnson & Mandeville, Newark, N. J., makes a specialty of supply lines, and has recently taken effective measures to enforce this fact upon the public mind. One method employed was to make a window display along the above mentioned lines. The articles at-



Brass Goods Set Up on Pipe Rack.

tached to the rack included Gauges, Gauge Cocks, Gas Cocks, Faucets, Oil and Grease Cups, Automatic Compression Grease Cups, all sorts of Lubricators and an extensive variety of Valves, including Globe, Gauge and Radiator Air Valves, Gate Valves, &c. The display was a novel one and attracted a great deal of attention. Above it was hung the following lettered sign:

### This is the Line for which we are Headquarters:

Pipe; Cast Iron, Malleable and Bronze Fittings; Valves and Packing; Pulleys; Hangers; Belting and Shafting.

In addition to the central feature of the window, it also included a number of heavy Cast Iron Fittings, Valves, &c., and a quantity of Malleable Iron Reducers for gas and water work, all joined together in graduated lines. In connection with the pipe rack and the goods attached it may be suggested that such an arrangement would afford a very neat and effective method of sampling the line inside the store as well as in the window.

Joseph Van Cleft of the firm of Joseph Van Cleft & Co., Newburg, N. Y., has made arrangements to retire from the Hardware business, and the store will be taken over by L. A. Van Cleft, or disposed of to other parties with whom negotiations are pending. The principal reason for retiring from the Hardware line is the increasing duties of Mr. Van Cleft as president of the Columbus Trust Company. He entered the Hardware business at Middletown, N. Y., in 1852, remaining there three years, when he went to New York City where he was employed for five years. After two years in the West he went to Newburg, forming a partnership with J. C. S. Hardenburgh. Later, he purchased his partner's interest, and subsequently removed to other quarters. In 1888 Mr. Van Cleft built the large and handsome building occupied by the firm on Broadway, and has since been conducting business at this address.

The Hardware establishment of H. D. Lewis, Burton, Neb., has been destroyed by fire.



## Ontario Retail Hardware and Stove Association.

For an association less than three years old, the annual convention of the Ontario Retail Hardware and Stove Dealers' Association, held at Hamilton, Ont., on Feb. 9, 10 and 11, was a notable success, nearly 200, or two-thirds of the membership, being in attendance. The exhibit feature was taken up for the first time, and in response to the invitation sent out 34 manufacturing firms sent displays of their goods. Both exhibitors and retailers were well pleased with this feature, and the exhibits are certain to be more numerous at the next convention.

The convention was called to order on Tuesday afternoon by J. R. Hambly, Barrie, president. After S. H. Alexander, representing the Entertainment Committee of the Hardware manufacturing and jobbing interests of Hamilton had delivered a brief welcome, Mr. Hambly presented his annual address, in part, as follows:

### President's Address.

As we look back to less than three years ago, when a few of the retail merchants of Ontario met for the first time to consider organization, and realize the extent to which it has grown since then, it goes to prove that we are deriving direct benefits.

During the past year the representatives of the jobbers have become very much interested in our association. They, along with the jobbers and the manufacturers, realize we are here to stay in order to look after our own rights. I do not hesitate to state, on account of the existence of our association, that a more friendly feeling exists to-day between the re-

tailers and the jobbers and manufacturers. They realize the fact that meeting together and exchanging ideas makes us better business men and better qualified to conduct our business on a proper basis. The more carefully we study our business and endeavor to conduct it on a proper basis, the more we are impressed not only with the dignity it bears but its tendency to educate and elevate.

### Competitors Should Be Friendly.

There is no sense in the theory that two men in the same line of business should be unfriendly; there are many sound reasons why they should be friendly, and our association has been the means of creating a friendship between our fellow Hardwaremen that could not have been brought about in any other way. The good-will of our fellow business associate should be just as desirable as the good-will of our customers and friends. We will always find some who believe that competition must be a war of hatred between man and man. We, as members of this association, know differently, and in meeting from time to time and becoming better acquainted, we learn that the other fellow is just as good as we are.

### Encroaching on the Hardwareman.

Among the many dealers in merchandise the Hardwareman is the most honorable in many respects, as he is the last one to encroach upon other lines. We see to-day dry-goods stores, grocery stores and others with Hardware upon their shelves; we often find wholesale dry-goods stores offering certain lines of Hardware for sale.

How are we to overcome this competition? By becoming better acquainted with each other and working together; Hardware merchants in the same town buying goods together, and if possible finding out where the goods are manufactured and supplied to merchants outside the Hardware trade. Should not we, as Hardware merchants, be true to the jobbers and manufacturers that are true to us?

We must not try to meet this class of trade with cheap goods, but talk quality, emphasize worth, cut loose from cheap, trashy goods. Profit lies in selling good goods, and it will build up a reputation that will be lasting, and will

### Traveling Men as Honorary Members.

A large percentage of the traveling representatives of the jobbers and manufacturers are honorary members of the Hardware associations in the United States, and take an active interest in helping to make the associations a success. Under no consideration would they think of shutting the association doors against these gentlemen. I hope before this convention closes you will decide to accept as honorary members any Hardware travelers who may desire to become members. These gentlemen, from the very nature of their duties, should be a prolific source of increasing our membership, and I therefore trust you will decide to admit them.

### Secretary's Report.

Secretary Wrigley, Toronto, in his report, said the best proof that the association was growing in member-



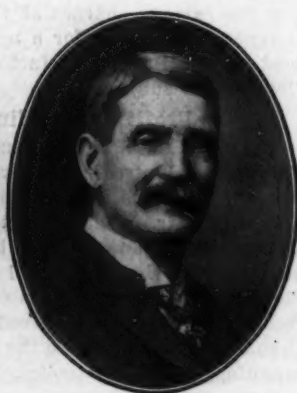
J. R. HAMBLY.



WESTON WRIGLEY.



A. BALLANTYNE.



JOHN CASLOR.

ship and prestige was the greatly increased number of successful firms in the larger towns and cities which had become affiliated with it. In spite of a year of depression and with absolutely no money spent for organization purposes the association was able to report a satisfactory increase in membership and an increased balance in the treasury.

### Local Organizations.

Mr. Wrigley said that what was good provincially was good locally, and the success of the fine local associations in Ottawa, Barrie and other places should encourage the formation of other local and district associations, particularly in New Ontario. Apart from price arrangements, which the laws prevent the association from touching, much valuable work can be done in local organizations.

### Mutual Fire Insurance.

He stated that the coming year ought to see something accomplished as a result of the investigation of the problem of mutual fire insurance. Present provincial laws allow the formation of farm mutual companies but prevent "mercantile and manufacturing" companies from being formed except upon payment of a \$10,000 deposit. The secretary was assured that if the association approached the legislature with a request that the words "mercantile and manufacturing" be struck out of the insurance act it could count upon the active support of the Canadian Manufacturers' Association.

### Convention Committees.

President Hambly appointed the following Committee on Resolutions: E. Brockleband, Jr., Arthur; S. L. Adolph, Listowel; Frank Taylor, Carleton Place, and Mr. Balles, Oshawa.

On nominations the following committee was appointed: J. S. Willoughby, Cookstown; W. D. McPherson, Prescott; F. A. Hoar, Barrie; J. E. Westcott, Ailsa Craig; F. W. Jeffery, Midland, and H. W. Bennett, Gananoque.

#### Executive Committee's Report.

The Executive Committee reported that the form letters used by the members of the association to collect bad accounts had proved most successful at a minimum of expense. Mention was made of an offer received from the Wisconsin Hardware Mutual Fire Insurance Company to place insurance among the members. It had to be declined, however, as the insurance companies had secured legislation preventing merchants from forming mutual fire companies. An effort will now be made to amend the law.

It was stated that the number of complaints received against jobbers and manufacturers selling to consumers was decreasing in proportion to the growing strength of the association.

The committee reported that it had been unable to induce the wholesalers to pay the charge for cartage from warehouse to freight shed at point of shipment, and had also failed to induce the Paint manufacturers to discontinue marking second grade lead as "No. 1." Action on these matters was recommended.

Subsequently the Executive Committee was instructed again to demand that the jobbers and manufacturers pay the cartage charges at the shipping end. Also that it repeat its demand for a new system of marking white lead, and failing a satisfactory reply to ask for legislation on the subject.

#### Profit in Handling Mixed Paints.

Robert Munro, general manager of the Canada Paint Company, Montreal, delivered an address on "Why Mixed Paints Are More Profitable to Handle Than Lead and Oil." Mr. Munro said that the chief reason Mixed Paints were a success was because of the value of the vehicles and the great skill with which they are used. He believed that merchants could look forward with full confidence to handling Mixed Paints with greater profit than lead and oil because the people wanted them and the manufacturers were endeavoring to meet these wants and the growing demand.

#### Visits to Manufacturing Plants.

On Wednesday morning the members in a body visited the B. Greening Wire Company's and the Canada Screw Company's plants; on Thursday morning the factories of the Canada Steel Goods Company, Canadian Tool & Shovel Company and the Canadian Drawn Steel Company, and on Friday morning a fair delegation remained to see the Hamilton Steel & Iron Company's blast furnace and rolling mills in operation. A carload of members were also taken to London on Friday to inspect the Enamel Ware works of the McClary Mfg. Company.

#### Travelers Admitted to Membership.

After considerable discussion it was decided to admit Hardware travelers as honorary members for a fee of \$1 a year. It was also decided to offer a prize to the traveler and another to the member who secured the most new members during the ensuing year.

Thursday afternoon was given up to an open session, to which the representatives of the manufacturing and jobbing houses were invited. Addresses were delivered by Colonel Gartshore, McClary Mfg. Company, London; M. Howell, Dover Mfg. Company, Canal Dover, Ohio; C. C. Ballantyne, Sherwin-Williams Company, Montreal; W. H. Gerke, Martin-Senour Company, Montreal; W. G. Francis, Benjamin Moore Company, Toronto; A. A. Briggs, London; J. H. Rowe, Dunnville; W. G. Scott, Mount Forest; A. Dolph, Preston; J. H. McRae, Gillette Safety Razor Company, Montreal, and others, the exchange of ideas being equally beneficial to manufacturers and retailers.

#### Election of Officers.

The officials chosen for the ensuing year are as follows:

PRESIDENT, D. Brocklebank, Arthur.  
FIRST VICE-PRESIDENT, A. Ballantyne, Brantford.

SECOND VICE-PRESIDENT, M. S. Madole, Napanee.

TREASURER, John Caslor, Toronto.

SECRETARY, Weston Wrigley, Toronto.

EXECUTIVE COMMITTEE.—J. R. Hambly, Barrie; J. W. Peart, St. Mary's; R. C. Chown, Belleville; D. Cinnamon, Lindsay; H. A. Morgan, Peterboro, and M. Weichel, Elmira.

AUDITORS.—J. W. Peacock, Toronto, and W. J. Bruce, West Toronto.

#### Banquet Tendered to the Members.

On Wednesday night the Hardware manufacturing and jobbing interests of Hamilton tendered the members of the association a banquet. About 250 persons sat down to what undoubtedly was the most interesting and enjoyable social event in the history of the Hardware trade in Canada. Robert Hobson, president of the Canadian Manufacturers' Association, was toastmaster, and addresses were delivered by President Hambly, Vice-President Madole, Secretary Wrigley, F. C. Lariviere, Cyrus Birge, president of the Canada Screw Company; Col. J. B. MacLean, publisher of *Hardware and Metal*, and others. Colonel MacLean in complimenting the association on its steady growth, commended the broad and unselfish lines upon which it was being built, and compared this with a previous and unsuccessful attempt to organize the trade on a basis of getting an extra percentage on goods bought by members.

#### The Exhibitors.

The following is a list of the exhibitors at the convention:

D. Maxwell & Sons, St. Mary's.	F. W. Bird Co., Hamilton.
Taylor, Forbes Co., Guelph.	Brantford Roofing Co., Brantford.
Carborundum Co., Niagara Falls, N. Y.	Metallic Roofing Co., Toronto.
Canadian Hart Wheels, Hamilton.	Jones Register Co., Toronto.
E. C. Atkins & Co., Hamilton.	National Cash Register Co., Toronto.
Gillette Safety Razor Co., Montreal.	Supreme Heating Co., Welland.
Pittsburgh Perfect Fence Co., Hamilton.	Heming Mfg. Co., Montreal.
Frost Wire Fence Co., Hamilton.	Canada Paint Co., Montreal.
Canadian Wire Fence Co., Hamilton.	Gurney-Tilden Co., Hamilton.
Banwell-Hoxie Co., Hamilton.	Luffin Rule Co., Windsor.
S. E. Bowser Co., Toronto.	Dover Mfg. Co., Canal Dover, Ohio.
Canadian Wire Goods Co., Hamilton.	Moffat Stove Co., Weston.
Johns-Manville Co., Toronto.	Allith Mfg. Co., Hamilton.
Dowswell Mfg. Co., Hamilton.	Odorless Closet Co., Hamilton.
Standard Paint Co., Montreal.	Hamilton & Toronto Sewer Pipe Co., Hamilton.
	Brandram-Henderson Co., Montreal.
	Shurley & Deltrich, Galt.

Most of the exhibitors distributed souvenirs to the retailers who visited the convention.

#### Convention Notes.

Hamilton is the Hardware manufacturing city of Canada, having a blast furnace and about 20 Hardware factories besides one jobbing house. These united in making the social features, the banquet and theater party, a success, and provided special cars to carry the members from factory to factory where the processes of drawing Wire, making Nails and Screws, stamping Shovels, &c., were studied by the visiting Hardwaremen.

The hotel where the convention was held was overcrowded, and a hall will be secured for next year. The three Barrie Hardwaremen slept and ate together, the New Liskeard delegation of two occupied the same berth on the train and the same bed in the hotel, and numerous other instances of a similar nature were reported to show the friendly feeling existing among the members, even though competitors for business in the same town.

For next year's convention invitations were received from Montreal, Toronto, Peterboro, London and Hamilton. The Executive Committee will announce their choice shortly after considering the advantages of the various places. It is likely that a summer excursion of Ontario Hardwaremen to Montreal will be arranged, a low rate to be secured and the members to be invited to take their wives along.

Much regret was expressed at the unavoidable absence of R. R. Williams, Hardware editor of *The Iron Age*, he having been invited to attend as a special guest.



**HOW TO CONDUCT A RETAIL HARDWARE BUSINESS.**

In opening the Question Box discussion on Tuesday evening, F. C. Lariviere, Montreal, who efficiently presided over this department of the convention's work, delivered an able address on "How to Conduct a Retail Hardware Business." We give the following extracts from his practical and suggestive address:

I have been asked before the opening of the Question Box to say a few words on "How to Conduct a Retail Hardware Business." Not wishing to take very much time with this question, on which volumes could be written, I will confine myself to two important questions.

1. The profits that can be obtained over the cost of goods.
2. The causes of failure in business.

**Frequent Turning of Stock.**

I have before me a very striking illustration which I think is so plain and so clear that every one of you will be interested. It is a well-known fact that the oftener the stock is turned over the more profitable is the business, and profits accrue very rapidly.



F. C. LARIVIERE.

Let us suppose an investment in stock of \$100 and the margin of profit 20 per cent. on cost.

If turned over five times during 10 years that \$100 would produce \$148.83 of gross profit.

If 10 times during 10 years, \$510.16.

If 20 times during 10 years, \$3733.60.

If turned over 40 times during 10 years, or every three months, \$146,870.74.

You at once see the productive difference of each different case which I have no doubt no one of you at first sight realized. This principle laid down, I believe the interest of the retailer is to limit his business or stock on hand to the goods that are most salable and carry a very small quantity of goods of which the demand is slight, and applying the same principle in fixing the selling price it can be seen that it is a better paying proposition to sell on a margin of 10 per cent. goods that can be turned over once a month, rather than sell twice a year goods at 50 per cent. profit.

**Business a Battle.**

Business is like a man-of-war bounded for a port called Success. You have heard that more than once. Have you realized that you cannot go forward in the business game unless you fight, and you cannot permanently succeed unless you continue to fight. The retail Hardware business to-day is really a long-drawn-out battle from start to finish. The business battle is the case of the survival of the fittest. Any time you are caught napping with your hands down, you are liable to get hit, and the referee may count 10 and out. Keeping everlastingly at it is the cost of the victory.

**If You Expect to Win in the Game of Business**

see that you lead. There should, however, be no such thing as enmity in business or hatred of your rival, only that genuine pleasure of honorably beating your competitor in the game or contest. To outclass a business competitor should bring that feeling of gratification that we all experience when we outclass a rival in any other game. If our heart is in the game, if we really love it, we find much pleasure in studying the various points, even though we are sometimes forced to accept a temporary setback or defeat.

You are all aware that net profits are the result of every move you make. There are practices that will increase net profit more quickly than others, and among them are good buying and watching investment in every line.

**Good Buying**

is not merely securing lowest prices. I believe the merchant who secures a fair price in a short time so that he has plenty of time to devote to the selling of his goods and the superintendence of his store is a better buyer than the merchant who gets the extra 2½ or 5 per cent., but in doing that uses so much of his time that the sales department is neglected.

**Tying Up Capital Needlessly.**

Numerous are the merchants who neglect the watching of investments in every line, yet of all means of producing net profits there is nothing so important as watching everywhere your investment. Your sales go up and down with the number of items you offer for sale, not with increase or decrease in the quantities you own of the various items. To own a six weeks' supply when a two weeks' supply would carry you safely you have needlessly tied up so much of your capital as is represented by the excess of four

weeks' supply. On that amount of the excess you lose not only the interest in itself and the cost of the storage, but also the loss of the profit you could have earned on other goods which might have been purchased with that amount.

**Store Policy.**

To be successful each store must have a policy, and in all of the departments must be seen at a glance the policy of the house. One of the best I know is to sell reliable goods at reasonable price, and give satisfaction to the customer at whatever cost may be.

Reciprocity of treatment with great efficiency as its prime motive will increase the interest of the customer in the business, and will also increase the efficiency of the staff and create a friendly and favorable mental attitude.

The gross returns of profits insured by a sale should be only secondary consideration. The good name of a firm is oftener of much greater importance than the capital it may dispose of.

**What Is a Fair Profit?**

Is it reasonable to complain about low prices? If they are too low they should be promptly put up. It is better to refuse orders than to take them at unprofitable prices. Let the other fellow have them. When a tradesman is doing everything possible to buy economically and work systematically, he can be fairly well assured that work which is unprofitable to him will not do his competitor much good. Volume of trade is not important unless it has profit-making quality. Better a small turnover on a profitable basis than big returns, which are swallowed by wages and other expenses.

**Slaughtering Prices.**

A fair profit-yielding price is not a thing that one needs to apologize for. The man who is always professing reason for selling at the low cost, by his action proclaims himself either a knave or fool. We know men who have played the "slaughtered price" game for years. There is no stability in their business. Their trade is casual. A buyer rarely returns. Their word cannot be relied on.

It is different with the man who makes no secret that he is in business for profit. Even though we sometimes cannot pay his prices, we are compelled to respect him for his frankness. We can trust him when he does alter prices to clear slow-moving stock.

**Room for Difference of Opinion**

In discussing prices it is well to remember that there is plenty of room for difference of opinion as to what constitutes a fair profit. A person of sound judgment who knows the requirements of his district and is able to anticipate and gauge its requirements, may make more profit at 30 per cent. than another man at 50 per cent.

He knows there will be demand for particular goods at each season of the year. He has them in stock. He does not wait until the demand is in full swing before he orders. He meets it as soon as it arises, gets his goods off quickly, and finishes with bare shelves.

His competitor has to refuse orders he knows are wanted and finishes the season with stock in hand that has to be sacrificed or carried over until next season.

**Running Business Is Not an Eight-Hour Job.**

The business man must be continually alert. Many a one owes more to the schemes elaborated in the quiet evening than to the work done with his hands in the shop. In thought he repeats the day's transactions, checks his work and his men's work, calculates, perchance, the profit he has made on sales, discovers where mistakes have been made and then anticipates the morrow's tasks, plans the work for the men, takes mental stock of his surrounding endeavors to foresee the probable effect of current events and market conditions on the trade of the future. This cannot be done so well in working hours when the busy man is constantly in demand to deal with details.

**Lack of Energy and Ability Responsible.**

To lack of capital is attributed over 50 per cent. of the total number of failures. I believe this is much over the reality, for many prefer to attribute to lack of capital the cause of failure rather than their own administration. I have studied and had occasion to investigate many failures, and I have found that when in the first years of business with no capital a merchant had succeeded in making a capital of \$3000, \$5000 or \$8000, he thought he was rich and began to pay less attention to business. He became a little more extravagant in personal expenses, and, above all, less attentive to customers, leaving it to his clerks to look after their wants.

This departure has the most fatal effect on the staff, for the moment the owner of a business lacks energy, stability and punctuality the whole of the staff follow suit. Hence capital is wiped out, and the man fails and attributes to lack of capital his lack of energy and ability.

Inexperience and incompetence count for a very large share, and I am greatly surprised at this, as this is surely one of the absolute qualifications of a successful trader, and I believe no jobber or manufacturer should grant credit to

a man in business who is incompetent, and this is one of the easiest things to find out.

#### Profiting by Each Other's Experience.

Then, again, as we are following the same highway, let us profit by one another's experience. Let us rise above that miserable spirit of jealousy and suspicion toward our brethren. Instead of criticizing, running down and slandering even our competitors, let us say to ourselves that we are in a position to imitate them, that competition is open to all. True, there will be only one at the head of the list, but it remains, nevertheless, for us to labor steadily, and to do our very best to get there, so that if we fail in our efforts it will be no fault of ours.

#### The Main Cause of Most Failures.

A casual observation of what is going on, especially in large cities, will suffice to convince us that the main cause of most failures is to be found in the peculiarities of those who fail rather than in the conditions against which they had to contend. Study the methods of those who succeed, and you will find that they are taking to their work with no faint heart, that they are not carried away by the pleasures of society, outdoor sports, and the theater or similar amusements.

I do not mean that one should refrain from all such pastimes, but they should occupy only a secondary place in our minds and occupations, for no one can hope to get along in the world without concentrating all his energies toward the attainment of the object he has in view. In this respect the same rules apply as regards business, and as regards the trades.

Before starting in any business one should make himself acquainted with all its details, with the various uses of all the goods offered for sale, as well as with their value. Do not be afraid to accumulate too much information, but work on earnestly and steadily, picking up all available data as you go along, and finding out where the various wares can be procured to the best advantage.

#### Punctuality and Perseverance.

In my opinion to feel that one has done his whole duty should be sufficient inducement to act as aforesaid. The sense of duty brings along with it steady habits and punctuality. Never fail to keep an engagement for punctuality is the mainstay of business success.

Many persons of ordinary ability and without any other assistance than their knowledge of business conditions in their particular trade, owe to their perseverance, their punctuality and their economy, achievements far exceeding their hopes. It follows that we should never feel discouraged, but resolutely face all difficulties and use them as stepping stones toward the desired goal, for what seems unattainable to-day may be easy of accomplishment to-morrow.

#### Cultivate Uprightness and Honesty.

which are indispensable to success, always keep your word. Never make a statement without being positive that it is true, and should you find out afterward that you were mistaken, do not hesitate to acknowledge your error. By doing so, you will retain the confidence not only of your customers, but that of your jobbers as well. All I have said may be summed up in one word, "character."

#### Business Not a Pastime.

Economy is another indispensable quality, for as you are all aware extravagance is the most frequent cause of failure. I refer to that kind of extravagance developed by meetings and junketings with friends, which keep one away from his work and desk. This truth is so generally admitted that it seems useless to insist upon it. I challenge contradiction when I say that business is not pastime, but a means of acquiring a fortune, or at least a competency, and that a merchant's aim should be to reap great profits from his trade, not only for the benefit of himself and family, but for the benefit of his employees as well.

#### Bookkeeping Key to Success.

A branch of work to which, as a rule, merchants do not give enough attention, is bookkeeping. If you only realized the variety of information and data which may be obtained from a proper system of accounting even as regards a small retailer, you would not think of practicing that false economy of which so many are guilty. What could be more useful than to realize the amount of one's sales or purchases, of one's stock, assets and liabilities. At any rate, you acknowledge that if you only had once a month all this data you would be better posted as to the real condition of affairs and in a better position to push matters to a satisfactory culmination, for bookkeeping is the key to success.

THE Centerville Hardware Company has been incorporated in Centerville, S. D., with a capital stock of \$15,000, and will carry Shelf and Heavy Hardware, Stoves, Tinware, Housefurnishings, Agricultural Implements, Paints, Oils and Sporting Goods.

### Price-Lists, Circulars, Etc.

*Manufacturers in Hardware and related lines are requested to send us copies of catalogues, price-lists, etc., for our Catalogue Department in New York; and at the same time to call attention to any new goods or additions to their lines, of which appropriate mention will be made, besides the brief reference to the catalogue or price-list in this column.*

RICHMOND CEDAR WORKS, Richmond, Va.: Circulars illustrated in natural colors referring to Matchless, Majestic and Typhoon Washing Machines and Steel Frame Ice Cream Freezers.

PORCELAIN ENAMELING ASSOCIATION OF AMERICA, Sheboygan, Wis.: Catalogue relating to a line of Enameled Ware.

WABASH SCREEN DOOR COMPANY, Commercial National Bank Building, Chicago, Ill.: Stove Board catalogue for 1909, showing Boards in four styles of finish.

WEBSTER MFG. COMPANY, 88 Reade street, New York: Catalogue with revised price-list relating to Gilbert Wood Split Pulleys, various styles of which are shown.

HENDEE MFG. COMPANY, Springfield, Mass.: 1909 catalogue illustrating and describing electric belt drive Indian Motorcycles.

JOSEPH DIXON CRUCIBLE COMPANY, Jersey City, N. J.: Booklet entitled "Lubricating the Motor," dealing with the lubrication of different parts of Motor Cars, Motor Boats and Motor Cycles.

L. W. LUELLEN, 27 State street, Boston, Mass., New York office, 115 Broadway: Catalogue illustrating and describing the Luellen Cup and Water Vendor, for use in schools, parks, department stores, &c.

HENRY A. DREER, Philadelphia Pa.: Illustrated descriptive catalogue of Agricultural and Horticultural Tools and Supplies, Poultry Supplies, &c.

ELITE MFG. COMPANY, Ashland, Ohio: Booklet devoted to a line of Reliable Lifting Jacks in sizes from 1 to 10 tons, adapted to a wide range of uses.

ST. LOUIS WASH BOARD COMPANY, 1445-1449 North Second street, St. Louis, Mo.: Illustrated booklet relating to Spiral Crimp Brass Wash Boards.

UPSON NUT COMPANY, Cleveland, Ohio: 1909 price-list relating to Nuts, Bolts, Bed Screws, Hook Bolts, Eye Bolts, Nutted Staples and Plow Clamps, Rivets, Axle Clips, Boxwood, Ivory and Folding Rules, Belt Fasteners, &c. Tables give information in regard to weights of Coach Screws, Carriage Bolts, Iron, &c.; also contents of full kegs and cases of Bolts, Coach and Lag Screws.

ZIMMERMAN MFG. COMPANY, Auburn, Ind.: Catalogues relating to Automobiles and Carriages and folder devoted to Monarch Windmills.

DOVER STAMPING & MFG. COMPANY, Cambridge, Mass.: Catalogue No. 33, of more than 200 pages, devoted to Plain and Retinned Stamped Ware, Japanned and Plated Tinware, Black and Galvanized Sheet Steel Ware and Kitchen Furnishing Goods. A separate booklet covers the company's line of Automobile and Motor Boat Specialties.

WIRE GOODE COMPANY, Worcester, Mass.: Discount sheet No. 28, February, 1909, applying to the company's catalogue No. 6, supplements April, 1908, and February, 1909.

BOSTON PRESSED METAL COMPANY, Worcester, Mass.: Catalogue illustrating and describing the Osborne Blind, Casement and Transom Adjusters.

CHARLES ROSS & SON COMPANY, 148-156 Classon avenue, Brooklyn, N. Y.: Catalogue No. 4, devoted to Dry Mixing and Grinding Machinery, for handling all kinds of dry materials.

CHANDLER & FARQUHAR COMPANY, 34-38 Federal street, Boston, Mass.: Booklet devoted to a partial list of Art Crafters' Tools and Supplies, carried in stock by the company.

LEE O. BURCH has succeeded to the Hardware business of Burch & Ryan, Quincy, Mich.



## PENNSYLVANIA RETAIL HARDWARE ASSOCIATION.

A long step in advance was marked by the eighth annual convention of the Pennsylvania Retail Hardware Association, held last week in Philadelphia. Chief among many causes of congratulation was the remarkable growth of the organization during the past year, in which period it has more than trebled in size, its scope being enlarged to embrace three adjoining States. Close to 500 paid up members are now enrolled, of whom an unusually large proportion attended the convention and participated in the business sessions, which were held every afternoon. On Wednesday and Thursday there were about 300 at the meetings, and fully half that number were present at the closing session. The proceedings were of undoubted interest to all and were directed in a masterly manner by the able officers of the association.

The headquarters of the convention were at the luxurious Bellevue-Stratford, a hostelry of national reputation and recognized as a business and social center of the city. The formal meetings were held in the famous Clover room, and everything possible was done by the hotel management to promote the convenience and comfort of the Hardwaremen. At the First Regiment Armory, perhaps half a mile from the hotel, was held the first Hardware show which has been attempted by the Pennsylvania association. That it was an unqualified success will be apparent from the imposing list of exhibitors given below.

Almost the first thing to meet the eye of visitors in Philadelphia last week was a big white electric sign reading

### WELCOME—P. R. H. A.

There were two of these signs on the great City Hall tower, which rises above Broad street, one facing north, one south, and they could be seen for many blocks. The signs meant something. For the perfection of all arrangements, for the success of the Hardware exhibit and for numerous delightful and profitable entertainment features, credit must be accorded to the liberality and carefully organized efforts of the local trade—manufacturers, jobbers and retailers—who justly claim that Philadelphia is one of the most important Hardware centers of the country. And not content with what they had done this year, these hospitable and public-spirited citizens extended to the association an invitation to come again in 1910, so cordial and so unmistakably sincere that it was enthusiastically accepted by unanimous vote.

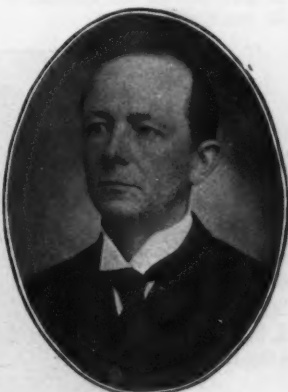
#### Local Committees.

Upon F. C. Goodwin, as director, fell perhaps the brunt of the local work connected with the exhibit and the general arrangements. He was actively assisted by R. L. Sheppard, Kinkert & Sheppard Company; C. B. Lowber, Lowber Bros., and E. E. Pennewill. The general local committee, appointed to co-operate with the Pennsylvania Retail Hardware Association was made up as follows: C. W. Asbury, Enterprise Mfg. Company; J. H. Bonbright and W. B. Charlton, Supplee Hardware Company; R. L. Sheppard, Kinkert & Sheppard Company; C. B. Lowber, Lowber Bros.; M. B. Taylor, Shields & Bro.; W. B. Parker, Biddle Hardware Company; Geo. Holmes, Chas. Ghiskey's Sons; J. R. Griffith, Germantown Tool Works; H. J. Fueller, Abram Cox Stove Company; Mr. Purcell, Quaker City Rubber Company; T. James Fernley, C. W. Summerfield, secretary of the Merchants and Travelers' Association of Philadelphia; G. A. Supplee and A. A. Miller, *The Iron Age*. J. H. Bonbright and T. J. Fernley were the leaders of the Entertainment Committee, being assisted by all the members of the General Committee. There was also a large Entertainment Committee of ladies, of which Mrs. F. C. Goodwin was chairman. Sub-

committees appointed from the above had charge of such matters as speakers, publicity, music, lighting, &c.

#### Opening Session.

If any one had any doubts as to the reanimation of the Pennsylvania Association, the efficiency of its officers and the complete success of the convention, they were entirely dispelled at the splendid opening session. At the fall of the gavel President Howe had before him at least twice as many members as ever attended such a meeting in that State before, and the number increased steadily,



J. F. HOWE.



W. P. LEWIS.

until there were full 300 in the room. The occasion was naturally seized upon as a time of greeting and congratulation.

A happy address of welcome was delivered by Edward S. Jackson, Miller Lock Company, president of the Hardware Merchants' and Manufacturers' Association of Philadelphia, who referred especially to the importance of the city as a Hardware center.

W. W. Supplee, Supplee Hardware Company, was introduced as the dean of the Hardware trade. He was the first president of the National Hardware Association, the jobbers' organization. In his remarks Mr. Supplee sketched the history of the association movement, telling something of his own efforts in that direction, and dwelt particularly on the importance of the jobbing distributor and the assistance which he renders to the retail merchant.

T. James Fernley, secretary of the National Hardware Association, then addressed the convention, speaking both as a Philadelphian and in his official capacity. He dwelt particularly on the fight against parcel post, in which he has been an active participant. Other local speakers were C. W. Summerfield, secretary of the Merchants' and Travelers' Association, and F. C. Goodwin, head of the Local Committee, who made interesting announcements regarding entertainment, &c.

#### Association to Be Incorporated.

The increased membership of the association, both present and prospective, and the growing importance of its finances have suggested the desirability of incorporation. The recommendation of its officers that this action be taken was indorsed by the convention. A complete new constitution and by-laws which had been drafted for the purpose of better meeting the requirements of the association was also presented and adopted with slight alterations decided on after careful deliberation.



D. E. HIBNER.

### Affiliated States.

A movement of much importance started during the past year has been the increase in the scope of the association to include the adjoining States of New Jersey, Delaware and Maryland and the District of Columbia. Conditions in these States are practically the same as in Pennsylvania, and, indeed, they are served by about the same jobbing houses. Those of their merchants, however, who have been interested in the association movement and desirous of lending it the weight of their support and participating in its advantages have not found sufficient encouragement for starting independent organizations. Many of them have accepted the invitation to affiliate with the Keystone State, and their support has been recognized by the election of vice-presidents from New Jersey and Maryland and provision for such an official from Delaware.

### From Other Associations.

A telegram of greeting and congratulation was received from the Iowa Retail Hardware Association, contemporaneously in session, and was duly answered. A telegraphic greeting was also received from Secretary Frank A. Bare of the Ohio Association. Secretary Corey of the National Retail Hardware Association and F. Alexander Chandler, Boston, a member of its Executive

C. B. Lowber, Lowber Bros., and R. L. Sheppard, Kinkert & Sheppard Company, both of Philadelphia, acted as sergeants-at-arms.

### Resolutions.

The Committee on Resolutions, S. S. Bryan, chairman, made an able report covering matters of State and national import which was adopted. In addition to the usual resolutions of thanks, appreciation, &c., the association resolved against parcel post in any form; also against proposed State legislation shortening the game fish season.

Opposition was also expressed to legislation requiring Paint manufacturers to print their formulas on their labels with legislation to prevent fraud, prohibit misbranding and misrepresentation, and require statements of net weight and measures on packages was favored.

The association resolved in favor of 1 cent letter postage, development of inland water ways and good roads.

### Philadelphia Again Next Year.

As stated in the introduction of this report, it was voted to return to Philadelphia again next year. C. W. Asbury and J. H. Bonbright, representing the local manufacturers and jobbers, addressed the convention at the final session, expressing the pleasure that had been felt in entertaining the association and cordially urging that



F. C. GOODWIN.



C. W. ASBURY.



S. S. BRYAN.

Committee, were present as representatives of that body and the former gave acceptable information and suggestions on topics of national interest. Mr. Chandler, who is also a director of the New England Association, came directly from the Connecticut convention at Waterbury and was en route to the New York convention at Rochester. He made an informal address, showing his enthusiasm for association work. H. P. King, Portland, Maine, another director of the New England Association, was also present.

### Prizes Awarded to Traveling Men.

To stimulate traveling men to act as boosters for the association among the trade and urge their customers to take out membership, prizes were offered to the salesmen securing the largest number of new members during the year. These prizes were awarded at the opening session, the fortunate recipients being E. T. Raleigh, Lovell Mfg. Company; W. B. Charlton, Supplee Hardware Company, and Mr. Montgomery, Pittsburgh Plate Glass Company.

### Convention Committees.

The following committees served the convention by appointment of the president:

AUDITING.—A. H. Kauffman, Lock Haven; E. E. Lyons, Greensburg; H. T. Albee, Galetton.

RESOLUTIONS.—S. S. Bryan, Titusville; G. L. Moore, Brownsville; Wm. Mendenhall, Montoursville; G. Guy, Bradford; A. H. Kauffman, Lock Haven.

PRESS.—S. C. Sheppard, Philadelphia; J. M. Dickson, New Castle; W. V. Taylor, Allegheny.

LEGISLATION.—A. Kaiser, Philadelphia; C. H. Miller, Huntingdon; Samuel McKnight, Allegheny; F. C. Goodwin, Germantown.

NOMINATIONS.—C. H. Miller, Huntingdon; A. W. Lieb, Wilkes-Barre; R. L. Sheppard, Philadelphia; C. W. Scarborough, Pittsburgh; G. V. Thompson, Mt. Jewett.

NEXT PLACE OF MEETING.—Messrs. Taylor, Hoover, Gill, Hackett and Orr.

Philadelphia be chosen for next year's meeting. They were followed by F. C. Goodwin, who, in spite of his arduous labors for many weeks past, declared that the local members would show that they could improve on this year's arrangements if the association would come back to Philadelphia in 1910. He added that favored by this year's experience, with better organization and larger numbers, the local members could handle the next convention without making such large demands on their generous manufacturing and jobbing friends. The vote to accept these cordial invitations was unanimously and enthusiastically carried.

### Mutual Insurance.

Mutual insurance is a prominent feature of association work in Pennsylvania, the State and national companies having the same headquarters and the same executive officers. As will be seen from the report of Secretary Lewis, the insurance feature has aided greatly in the growth of the State Hardware Association, and, indeed, the results of the past year could not have been accomplished without such assistance. C. H. Miller, Huntingdon, president of the insurance companies, delivered an interesting address, bringing out the benefits of mutual insurance to Hardwaremen and outlining the prosperous condition of the companies at the close of the year's operations.

### Address of C. S. Davis.

C. S. Davis, Oakland, Md., who was elected vice-president of the association from his State, favored the convention by delivering a brief, informal address, bringing out many practical methods of advertising and conducting a Hardware business. Mr. Davis is well known for the originality and efficiency of his methods, and his helpful suggestions were listened to with much interest.



### Salesmanship and Advertising.

An extended address much enjoyed by the convention on the subject of business building and salesmanship was delivered by J. D. Kenyon of the Sheldon School, New York. Mr. Kenyon is a fluent and witty speaker, and his remarks were both entertaining and instructive.

Two addresses on advertising embodying many suggestive ideas and practical illustrations were given by R. D. Baldwin, advertising manager of the Simonds Mfg. Company, and A. C. Hoffman, manager of the *Outing Magazine* and representative of the Quoin Club, an association of professional advertising men. Mr. Hoffman's subject was, "What General Advertising Can Do for the Hardware Retailers."

### Question Box.

The great progress of the association during the past year made it incumbent upon the convention to devote much time to the consideration of matters relating to organization and general business. The programme also called for an unusual number of formal addresses on advertising and kindred subjects. For these reasons the question box with its large crop of questions of vital interest to Hardware merchants received somewhat less consideration than might have been desired.

Matters relating to credits came in for the largest amount of attention, the subject being introduced by the request of some member for a form of lease on which large articles like Stoves could safely be sold on the deferred payment plan. The laws in the State of Pennsyl-



J. S. BONBRIGHT.



E. S. JACKSON.

vania, as is well known, make it easy for unscrupulous persons to defraud the mercantile interests.

Much information of value was given the members by S. S. Bryan, Titusville, who stated that he had posted himself by expensive experience on such matters, and invited any of those present to write to him for information. It was brought out that there is no such thing as a chattel mortgage in the State, and that most documents which merchants get their debtors to sign are worthless in law, although debtors do not always know this, and signing the paper usually increases their sense of obligation. Many simply sell on open credit, but follow up collections closely.

There was a general agreement that the trade are more careful in extending credits and more prompt in following up collections than a few years ago. Many reasons were given why it is bad policy to be lax with slow pay. It creates the idea that profits are unduly large, and really drives away trade because men who owe one merchant more than they can pay will go elsewhere and buy for cash. The catalogue houses and department stores are educating the public to buy for cash, and merchants should at least get down to a business basis.

### Parcel Post.

National Secretary Corey, who conducted the Question Box, talked at considerable length on Parcel Post, explaining to the members the present status of the question, outlining what has been done and is being done, and urging that action be taken both individually and as an association to prevent if possible the adoption of Senator Beveridge's experimental measure which he regarded as likely to have the effect of an entering wedge.

### Attitude of the Express Companies.

Mr. Corey stated that his personal investigations led him to believe that the principal argument in favor of parcel post was that it might tend to bring the express companies to terms. He stated, however, that no one had been able to discover any influence brought to bear or aggressive action taken by the express interests toward defeating parcel post legislation.

Mr. Bryan called attention to a comprehensive editorial on the subject of express service appearing in the current week's issue of *The Iron Age*.

### Legislative Questions.

Legislative questions are always a bugbear in the State of Pennsylvania, and considerable attention is devoted to them at every convention. In addition to matters already referred to there was some discussion of the garnishee law, the effort to repeal the mercantile tax, the proposed shortening of the game fish season, &c. The members were fortunate in having the advice of A. S. Moulthorp, Moulthorp Bros., Dubois, an alert member of the Legislature, and A. Kaiser, A. Kaiser & Bro., Philadelphia, who has devoted a great deal of time and attention to such matters. On some of these questions action was taken, as reported under the head of resolutions.

### Election of Officers.

In its new president, D. E. Hibner, Dubois, the association is fortunate in the selection of a genial, able and broad-gauged business man to whom the administration of its affairs may be intrusted with implicit confidence that the progress of the past year will be continued. The matter of the election of vice-presidents from affiliated States has been referred to elsewhere. Provision was made for a vice-president from Delaware, who will be elected by the Executive Committee. In accordance with the new constitution, the office of secretary is filled by the Executive Committee. A meeting was held after the close of the convention and Mr. Lewis was re-elected for the ensuing year. The following are the officers for the ensuing year:

PRESIDENT, D. E. Hibner, Dubois.

VICE-PRESIDENT FOR PENNSYLVANIA, R. L. Sheppard, Philadelphia.

VICE-PRESIDENT FOR NEW JERSEY, C. E. Schroeder, Atlantic City.

VICE-PRESIDENT FOR MARYLAND, C. S. Davis, Oakland.

SECRETARY-TREASURER, W. P. Lewis, Huntingdon.

EXECUTIVE COMMITTEE, W. V. Taylor, Allegheny; A. W. Lieb, Williamsport; F. C. Goodwin, Germantown; J. F. Howe, Freedom.

DELEGATES TO NATIONAL CONVENTION, President Hibner, Secretary Lewis, Samuel McKnight, Allegheny.

### Entertainment.

Many enjoyable features of entertainment were provided by the local Hardware interests and others, special plans being made for the pleasure of the ladies, quite a number of whom participated in the trip to Philadelphia. The chief function was a smoker and supper, with vaudeville, given by the Philadelphia manufacturers and jobbers at the Hotel Majestic, a palatial and fashionable resort of the city. This occurred the evening before the Lincoln centenary, an event which was used to give character to the occasion, handsome portraits of Lincoln being distributed by the management of the hotel. The affair was excellently conceived and handled and reflected great credit on the many gentlemen who contributed to its success.

Other entertainment for the ladies included motor rides about the city, trips to points of historical interest and a theater party Friday afternoon. The musical teas held in the Bellevue-Stratford every afternoon were also much enjoyed.

Wednesday evening representatives of the Bindley Hardware Company, James C. Lindsay Hardware Company and the Stove & Range Company of Pittsburgh, all Pittsburgh houses, held a large theater party, after which the guests were given a supper by Mr. Boston of the American Wringer Company.

Members received cards inviting them to visit the rooms of the Merchants' and Travelers' Association, and

were also tendered the courtesies of the Manufacturers' Club of Philadelphia.

Henry Disston & Sons, the Enterprise Mfg. Company, Fayette R. Plumb, Inc.; the Miller Lock Company, and the North Bros. Mfg. Company, five leading Philadelphia manufacturers, who have been acting together in exhibiting at the retail Hardware conventions this year, gave a delightful dinner at the Union League Club to the officers and Executive Committee of the Pennsylvania Association.

An enjoyable feature of the convention was the singing at the beginning of every meeting, the success of which was due to the spirited direction of C. E. Tobias, Philadelphia, proprietor of "The Tool Box." Under his leadership popular and patriotic airs were heartily sung while the convention hall was filling up, thus enlivening a half hour which is often slow and stupid. Mr. Tobias also sang solos and entertained with monologues. Appreciation of his geniality was shown by the creation of the office of chief chorister, to which he was enthusiastically elected.

#### **PRESIDENT'S ADDRESS.**

Much of the progress of the association during the past year has been due to the wise and devoted efforts of President J. F. Howe, Freedom. Starting under somewhat doubtful auspices, his administration is an example of efficiency and accomplishment in the up-building of the association. Mr. Howe also proved himself an able and experienced presiding officer, combining ease and tact with firmness and clear-headed resource. In his annual address he referred to some of the problems which had to be faced last year and the methods of meeting them. Particular attention was paid to the matter of conducting Hardware exhibits in connection with the conventions, the view being taken that association members should encourage exhibitors by placing orders with their representatives in charge. He also referred to jobbers selling consumers, a matter which has been constantly agitated in the association ever since its organization, and on which he called for concerted and decisive action. President Howe said, in part:

I believe that it is self evident that at the present time our association is in a very flourishing condition, and instead of consuming time in going over the means which have brought this about, I believe it more profitable to look into the future and try to determine if the present methods—methods which have brought the success which we now enjoy—will be sufficient in the future to perpetuate our organization and increase its efficiency.

The great majority of our present membership is new. They were induced to join because our secretary or some one told them of the benefits they would derive. We do not know if they will continue to be members, permanently or not.

#### **It Will All Depend**

on what they believe they are getting out of it. Those who attend this meeting will stay with us for another year at least, for they will get enough enthusiasm here to last through the year.

#### **General Discussion a Valuable Feature.**

A great many things suggest themselves to one's mind who is giving thought to association work which might be taken up. Several questions which have suggested themselves to me will be discussed under the head of Question Box, and this leads me to say that a general discussion by the members is one of the valuable features of these conventions. More time must be allotted for this, and the members encouraged to ask questions, offer suggestions—get a more general interchange of ideas from three to five minutes.

#### **A Permanent Organizer.**

One of the matters I would mention for your consideration is the suggestion that we put enough money in our treasury to keep a capable, tactful man out among our members a large part of the time. A tremendous power lies dormant in these associations that should be used up and brought into action. I believe the right man could accomplish a great deal for our members by encouraging the organization of local associations; encourage more liberal treatment of each other; discourage ruinous price-cutting by local competitors, and smoothing over any difficulty that came up between the members. The local situation as regards catalogue houses could be taken up and ways devised to encourage the people to buy at home.

#### **The Convention Problem.**

It is evident from the foregoing suggestions that there must be something to an association besides the annual meet-

ing. The convention, however, is a very important factor in association life. This is the place we look forward to for advice, enthusiasm, and inspiration. Our opinion of the association is determined largely by the impressions we receive at the convention. It is highly important, then, to the association, in fact, it is vital to the very life of the association, that we have a successful convention.

The meetings as held in the past, with no exhibits, and with an indifferent programme, will not hold an association together. It may do while the association is young and enthusiastic, but it is admitted by experienced association men that results must be shown or the association disintegrates.

#### **Exhibition Conventions.**

I am convinced that the annual convention, as typified by our meeting here, which might be called the "exhibition convention," is the best idea for all interests concerned, that has yet been evolved. A carefully prepared programme for the sessions, and a large and varied exhibition by the best manufacturers and jobbers, combine to interest and educate the retailer along just the lines where he most needs strengthening. Now, will such conventions be possible in the future, or until the time arrives when something better will be substituted? I answer, most emphatically, "No," unless conducted in a different manner from the way they have been managed at State conventions in the past.

#### **Exhibits Not Profitable.**

The feeling is already growing among manufacturers and jobbers, that, on past experience, exhibits do not pay. When the exhibition idea first came up, it was received with favor by manufacturers, and they believed it would prove very profitable advertising. It is possible, however, that the thought that they would have the good will of the retailers if they patronized the conventions may have influenced them somewhat in reaching that conclusion. But after the manufacturer had been to a few conventions and had figured up his expenses and estimated the results, he readily arrived at the conclusion that it did not pay. Some large concerns who formerly exhibited at nearly all of the State meetings, flatly refused now to patronize the conventions. Others are making exhibits in their own States only, but they say they do not think it pays, considering the large expense involved, viewed strictly from a business standpoint.

#### **Complaints of the Manufacturers.**

I personally made a short canvass among manufacturers and had an opportunity to find out the reasons why they are not in favor of the exhibit. They state first, that they sell no goods at the meeting and do not know that any future orders are received as a result of their exhibition. That the expense is too great, that it is necessary to entertain the members—they give away expensive souvenirs—and that it takes the time of about three men for a week, and that item alone costs \$150 to \$200. The advertising manager of one concern told me they spent over \$3000 one year on conventions, and the management had positively refused to allow a continuance. Another firm stated they gave away \$300 worth of souvenirs alone one year at conventions, and their total expense was several thousand dollars. They had discontinued entirely.

#### **Extravagant Entertaining.**

This manager stated he believed other exhibitors felt as he did, but some were still induced for one reason and another to continue; that some of their own representatives were to blame in some instances by being too extravagant in their entertaining; that it was their firm's money they were spending, not theirs, and when the expenses were all tabulated, the total sum spent was out of all proportion to results. I took the ground that the "convention exhibit" idea was all right, and it afforded the best opportunity for profitable advertising that had ever been offered to the manufacturer; that the manufacturer himself is largely to blame that it was not proved a complete success. The manufacturer has encouraged the members to consider the convention an outing, a vacation, and to look at the trip to the annual meeting as anything except a business matter.

#### **The Real Value of Exhibits.**

If these exhibitions are to be of value to the manufacturer they should instruct the men having their goods in charge that they are not at the convention to see how much of the firm's money they can dispose of, keeping "open house" for the entertainment of all the visitors at the meeting, but they are to show and explain the goods they make and try to show the retailer how he can sell more of them. The souvenir craze is a mistake. There is no earthly reason why a manufacturer should give away some hundreds of dollars' worth of trinkets which are of no account to the recipient, but which help to run up the expense account of the exhibitor to such a figure that he never wants to hear of a convention again.

With but one exception, these men admitted there was no doubt in their minds but that the exhibits could be made a good thing. They knew the officers of some of the State associations had tried to induce their members to show their



appreciation by placing orders, but while a few of the leading men of the organization saw the necessity of this, the "rank and file" went to the conventions for a "picnic and the souvenirs," and were not interested in anything else.

#### Members Must Support Exhibits.

Now, we want these exhibits to continue, and they will continue if you do your duty by your organization. The matter is entirely within your control. You should make this a business matter. You should attend every session of the convention, and should also spend all of the balance of the time possible in the exhibition hall. Show your interest by placing orders with your friends—the people who have come here and are spending their time and money to make this association a success.

We must have the manufacturer here on account of the financial support we receive from him, for without this support these great conventions will be impossible. It must not be expected that he will continue to come unless he gets results. We must make it our business to see that he gets business. This is simply giving the man who rents our spaces and makes an exhibit, a square deal. It isn't fair to ask him to come again unless we do. This is co-operation. The opportunity to make the Pennsylvania Hardware Association a power for good is right here. The matter is in your hands. Will you do your duty?

#### Power of Combined Effort.

Now, what has the association been doing, and what can it do for the benefit of the members outside of the convention and the insurance we carry? And I believe this is a question that is often asked by our members. I believe it has done a good deal, in a general way. I will admit there is a great deal it has not accomplished, but this is not because the association principle is wrong.

The rapid growth of associations during the last 10 years among all sorts and conditions of men, from the coal heavers' union to the multi-millionaire-Bankers' Association, proves not only that there is a widespread dissatisfaction with existing conditions, but also, that there is a universal awakening to the fact that by combining their efforts, by co-operation, results can be accomplished which would be utterly impossible, acting independently. The reason why we have not accomplished more is because we have not yet learned to use this power, but we are learning slowly.

There has been some excuse for inactivity perhaps in the past, on account of our small membership, but now, with nearly 500 of the best Hardware men of Pennsylvania, New Jersey, Maryland and Delaware, back of us, and with the possibility—yes, the certainty—that the number will be 1000 before this year closes, there can be no such excuse offered in the future.

#### Jobbers Selling Consumers.

I am going to touch but one question on which I shall advise that the association take definite and prompt action, for the benefit of our members, and I shall leave to others the privilege of suggesting other subjects which should command your attention.

The subject I shall refer to is an old one. It has been mentioned at every meeting since our association was organized. It is in my opinion the greatest menace which threatens the retail merchant to-day. It causes more complaints from our members than all other troubles combined, and the unique thing about it is, we have the remedy in our own hands and all we need do is to administer it.

You all understand, I believe, that I refer to the jobber and manufacturer, who sells to our customer, the consumer. We can compete with the catalogue house, for he has only a retail consumer's trade; but no retailer can afford to compete with a jobber or manufacturer, even if he charges the consumer somewhat more than the retailer pays, which he seldom does. There is not a merchant in this hall but what knows the mischief these pirates are doing and how they are demoralizing the trade. When I think this matter over, I cannot understand why the merchant has allowed this thing to grow to such proportions.

#### Merchants Have Seen Their Profits Dwindle

year after year on this account, yet have accepted it stoically as if it were inevitable and must be borne. Is there a merchant in this State, especially within 70 miles of Pittsburgh, Philadelphia or New York, whose best trade is not canvassed by jobbers? You know that this is absolutely wrong. You know you should not permit it. You know you have no business to purchase goods from a jobber who sells to your brother retailers' customers if you would not buy of a jobber who would openly sell to your customers in your own neighborhood.

The time for temporizing is past. We should have stopped it long ago before it grew to such magnitude. Such action on our part would be welcomed by the best jobbers in the country. A great many of them seem to think they are compelled to sell to consumers because other jobbers do, and they often tell us that they would be glad if the retailers would force the jobbers to stop it.

I believe the merchants' associations in other lines would co-operate with us, and certainly the Hardware associations

in other States would do so. The jobbers for some years have expected us to enforce this principle, and I believe they are willing to abide by it if we enforce it without discrimination.

Why should the retailer hesitate about taking up this question? The manufacturer gives heed to the jobbers' protests, because the jobber will stop his purchases if he does not. The jobber will give heed to the retailer when he thinks the retailer is going to stop purchasing.

#### Systematic Action Recommended.

I trust you will take this matter up in a systematic way at this meeting, that something may be accomplished, and that promptly. We have an absolute right to do this, and it is a positive duty we owe ourselves and our brother merchants which we should not shirk. I believe, if the convention should so decide, that it might be policy for our secretary, or some one representing the association, to call on the jobbers of the States concerned, and take up the question, and inform them that the retail merchants of these States believe the retail and wholesale business should be divorced. If the merchants will take this up in earnest, and be loyal to the cause, we can eliminate this evil entirely within a year, and without any injustice or injury to anyone.

#### SECRETARY-TREASURER'S REPORT.

The splendid work which has been done during the past year by the association's new secretary, W. P. Lewis, Huntingdon, was fully recognized. He has labored tirelessly and efficiently in adding to the membership of the association, preparing for the convention and carrying on the business management of the Hardware exhibit, the profits of which belong entirely to the association, as well as for the State and National Hardware mutual insurance companies, of which he is also secretary. That portion of his report which was devoted to the finances of the association was especially noteworthy. In order to conduct his campaign for new memberships Mr. Lewis secured a note for a considerable sum of money from the Executive Committee of the association, who indorsed the paper personally. By careful maneuvering, however, he succeeded in getting along without discounting the note, which he returned to President Howe to be destroyed before the convention amid vigorous applause. Mr. Lewis' report was, in part, as follows:

The past year has been one of unusual labor in the annals of the Pennsylvania Retail Hardware Association. The records of the association were placed in my hands May 1, 1908, about 60 days after the Cambridge Springs convention. The membership record showed at that time about 94 names of bonafide members. That is, men who had paid their 1908 dues. The present membership record, not counting the names of any who may have come in at this convention (there were between 25 and 50) shows 448 bona fide members, being a gain of 354 new firms since May 1.

It may be of interest to know who secured these new men. The credit on our membership record appears as follows: There are 14 persons, members of the association and traveling men, who secured, all told, 64 members. The other 290 were secured by the solicitors of the Pennsylvania and National Fire Insurance Companies and the secretary.

The secretary made several soliciting trips, and planned to make more, but the pressure arising from the development of the convention and increase of business in the insurance companies, prevented. This statement of fact indicates the potentiality of the insurance companies for increase of membership in the association.

#### Methods of Raising Money.

The prime necessity in the development of our association to a position of usefulness and influence is adequate financing. The income from our dues is small; at least, that is true at present. We cannot get members without personal solicitation, any more than the jobber can get orders without personal solicitation. This costs money. If it had not been for the insurance companies, who furnished two-thirds of the money and all of the traveling talent, there would have been no money left whatsoever from the dues.

#### An Exhibition Once a Year Gives Us an Opportunity.

by the most rigid and careful management, to make a little money. It is for this reason that the members have been urged to buy goods from those exhibiting. If goods are bought from the exhibitors to any consequential extent, we will be able to fill a hall to some profit to the association. That it is perfectly practical to develop the habit of buying once a year at our annual convention there is no question. That this can be done by the members at absolutely no personal cost or sacrifice, is equally true.

#### Official Publication.

The association will also issue this year an official publication. This publication will contain a stenographic report

of all sessions. This publication will carry a large number of advertisers. There will be a page of ads and then a page of the proceedings. This publication will in fact be "history." It will record quite accurately everything which occurred on the floor of the convention.

This publication will be mailed to every Hardware merchant in these four States. The mailing alone will cost \$250, but that publication, put into the hands of the Hardware merchants in these four States, will be a monumental demonstration of the vitality of the Pennsylvania Hardware Association. It will indicate the lines of activity along which the association can effectively operate. It will pave the way for a personal solicitation in these four States for new members, which should result in an increase of membership for 1909 which would exceed materially the increase of 1908. Therefore this publication is of the greatest value to our association.

#### Necessity of Advertisements.

But this publication would not be in the remotest degree practical, were it not for the advertisers. Therefore, the membership is again urged to keep this official publication before them on their desks the entire year. Study the advertisements, and see if you cannot enter into profitable business relations with them. In writing them, say you saw their ad. in the Pennsylvania Official Publication. Co-operation here will be as forceful as buying of the exhibitors on the armory floor. It is understood when we have solicited advertisers that they must make satisfactory prices and quality. Otherwise, the membership recognizes no obligation to do business with them.

#### Use of Buying Power.

The foregoing indicates two lines, which should yield revenue to the association, and the success of either or both of these lies with the membership. It is, in fact, giving to the association the benefit of the influence of a portion of your buying power, and if Pennsylvania will do this once a year at our merchandise exhibitions, and all through the year from the official publication, it will be worth more to the association than if you paid dues two or three times the present amount, and any commercial relationship to which our members are entitled will surely be accomplished.

#### Benefits of the Association to Members.

It is a common experience to find men who say they don't see where they get any benefit. There are two answers to this observation; one is to inquire what benefit he expects? He will usually name any one of a dozen ills which attach to commercial life. Then, inquire if he has himself made any effort to help the matter. The other answer is to point out the many monumental accomplishments of the Associated Hardware Merchants of the United States.

Any man who knows association history, knows that the greatest manufacturers of Hardware products have come to respect, in a manner, and to a degree never known before, the right of the retailer. That everything which every one desires has not come to pass, there is no doubt. But it is clear that any influence which would tend toward the disruption of the Hardware organization would leave the retailer in a plight more calamitous than he has yet known.

#### Questions of the Day

Common defense demands that we stand as one man against parcel post. Common interests demand that we use all our influence for good roads. Good roads mean that traffic can be continuous throughout the year. Good roads would improve conditions wonderfully. Are we sitting down waiting for something to occur, or can we do something about it?

Inland Water Ways are of vast importance, and of direct importance to many communities in this State. Inland Water Ways mean low freight rates. Low freight rates mean wider market. Wider market means increased output. Increased output means heavier pay rolls. Heavier pay rolls mean more money in circulation, and plenty of money in circulation means to the Hardware merchant business and profit, and there is no reason why we should not use our strongest influence to bring to pass these conditions.

The retail Hardware associations are growing in power and influence. They are nonpolitical organizations, whose viewpoint is broad. They are a distinct benefit to the members, and their possibilities of usefulness are great. Pennsylvania to-day has a chance to know and be known. Pennsylvania to-day is shaking off the blight of indifference, and if the gathering here to-day is a gauge of the spirit of the commonwealth, the 1909 slogan should be 1000 members for this association.

#### MONEY MAKING METHODS FOR THE RETAILER.

C. W. Scarborough, Scarborough & Klauss, Pittsburgh, delivered a very interesting address on the subject, "Money Making Methods for the Retailer." His remarks, which abounded in helpful ideas and practical suggestions, were in part, as follows:

In order to get your share of trade in your line, you must not only do honest work, and thereby hold the trade you

have, but in addition, use intelligent energy to add to your list of customers many who have become dissatisfied with the treatment which they have received at the hand of some careless or selfish dealer. I am going to make a few suggestions to the man who operates a general repair shop in connection with his Hardware store.

#### Making Customers for Repairs.

First, intelligently inform the public what you can do and how you will do it. Impart this information at the proper season and in an intelligent manner and pleasing results will be sure to follow. In order to accomplish this end you must first procure your mailing list. This may be obtained in various ways.

For instance, if you are distributing a fine calendar or catalogue, have the distributor get the name of every household who receives a copy, with his street and number; this will give you a valuable and reliable list, and whether they be owners or tenants, are in almost every case, possible customers. Then as the time approaches for seasonable goods or any special kind of work, get your printed matter into the hands of every one on your mailing list, and do not try to reach them in any other way but by a sealed letter. Penny postage is that much money and printed matter wasted.

#### A Form of Letter.

In regard to the form your letter or circular may assume, each one here may have a different idea, but for the benefit of any who may be interested in this subject I will here read a few points or suggestions incorporated in a letter sent out by our firm about a year ago:

Dear Sir.—The frequent freezing and thawing during the past winter has been very trying on the exposed Tinwork and Conductors of buildings in this section. You no doubt have experienced some trouble or inconvenience from this cause and will be obliged to have your Roofing and Conductors examined and needed repairs adjusted.

Very often the roof, which is a very important part of your house, is given little thought and attention, until the walls and ceilings, &c., are damaged by leaks.

We are entering on that season of the year that is characterized by heavy rains. Better have these repairs attended to now.

This should be done by competent and responsible people. To this end we desire to call your attention to our Roofing and Repair department. We employ at all times a large force of competent mechanics, and use the best grades of material obtainable. Therefore we are in a position to do your work promptly and in a satisfactory manner.

We make a specialty of repairing Tin and Slate Roofs, Gutters, Valleys, Conductors, &c. Tinwork to be kept in good condition should be painted at least every two years. If this is neglected, the Tin will soon rust out, making it necessary to replace it with new material. On the other hand, Tinwork that is kept well painted will save you much annoyance and expense. When was your Tinwork painted?

We will be pleased to examine your Roofs and Tinwork, and report to you the condition of same, also furnish you with an estimate on the cost of making the necessary repairs. We make no charge for examinations and estimates. A phone call or mail order will receive prompt and careful attention.

Thanking you for past favors and awaiting your further order, we remain,

Yours respectfully,

SCARBOROUGH & KLAUSS.

#### A Follow-Up Letter.

This letter brought in a great many replies, but to clinch an order from the wavering, we followed it up a month later with another, very much in the same strain. Here are the first few lines:

Last month we sent you a letter, calling your attention to our Roofing and Repair department, and to our facilities for doing this sort of work in a prompt and satisfactory manner. If you have not yet placed your order, let us look over your Roofing and Conductors and report the condition of same, and cost of making necessary repairs. This information we furnish you free.

You do not obligate yourself to give us your order, but we wish to impress on your mind that your neglect of this important matter may cause you great annoyance and considerable expense, while if taken in time the cost may be nominal.

In this letter we also called attention to the many different seasonable articles for sale in our Hardware department.

#### A Very Good Season's Business.

I might say here, I believe these letters assisted very considerably in furnishing us with a very good season's business, and that in the face of tight money conditions and unemployed labor.

We used these same tactics in varied forms all through the year, and are now preparing copy for the coming spring trade. In composing these letters it is well to avoid set forms, using original suggestions as much as possible, and thereby show your very self in your circular. Call your customers' attention to conditions which will be sure to follow if he neglects to protect against the wear and tear of time and the elements; have full confidence in your own ability to serve your trade, and you will soon obtain their confidence.

Don't be afraid to make suggestions, as they are the root of the whole matter of intelligent advertising. I do not favor using the daily newspaper for advertising our



business in large cities, as the expense is so enormous the results do not justify it; but, for small cities or country towns where space is not so expensive, I believe there is no better medium for reaching your customers.

#### Maintenance of Prices.

Here I wish to take a stand for the maintenance of prices. If you wish to make a leader of certain articles to draw trade, and reduce their price, to accomplish that end, never select standard brands which you always expect to carry, as it is almost impossible to restore prices on such articles when once reduced; rather purchase job lots, and when sold out of them at a cut price, that will end the matter.

#### A Clean Stock.

Another subject of importance is a clean stock; clean in appearance and quick sellers. We know it is not possible to figure out just what you will need of certain articles through their season, but in our opinion it is far better to duplicate your orders than to be compelled to either carry over quite a stock or sacrifice the goods in order to move them, and invest their value in seasonable goods.

#### Quantity Prices.

And to the small dealer, beware of the quantity price fellow. Do not buy large quantity in order to get a closer price. Very often the extra discount will be overbalanced by the interest on the investment. In many cases, it is well to dispose of surplus stock on your bargain counter as the room they occupy may be more advantageously used to display better selling goods.

#### Guaranteeing Satisfaction.

A very good way to create confidence and retain your trade, is to absolutely guarantee satisfaction. If the goods you handle will not bear this sort of a guarantee dispose of them and secure another line which will; and when you do guarantee an article never quibble over its return, but cheerfully make the exchange, showing your customer you consider this as a matter of small importance. You will not lose by the operation.

One thing more; a successful firm is bound to be a close collector. I do not mean to champion any who will oppress or hound the unfortunate, but short accounts are easiest paid.

#### PAINT LEGISLATION.

G. B. Heckel, secretary of the Paint Manufacturers' Association of the United States, delivered an address on the subject of "Paint Legislation," presenting very clearly the arguments of the manufacturers who are opposed to a law requiring the printing of formulas on the labels of cans of prepared paint. The association subsequently passed a resolution opposing such legislation, although favoring laws to prevent misbranding and misrepresentation. Mr. Heckel said, in part:

There is now before our State Legislature a proposed law in which every one of you is interested—a bill to compel the manufacturer of paints to print the complete formula on the package. It looks reasonable, doesn't it? Calculated to prevent the "doper" from "doping," and the "fakir" from "faking." Calculated also to reduce paint-making to a commodity basis, with the selling price regulated by the formula. Nicely calculated to promote a paint trust, which, when it has been forced into existence, will be able to do its own distributing and perhaps its own painting. Calculated also as completely as possible to foster the mail order sale of paints direct to the consumer. This bill might justly be designated, "A Bill to Encourage the Direct Sale of Paint by Mail."

As secretary of the Paint Manufacturers' Association, I have been surprised to find the Hardware associations rather generally inclined to favor measures of this sort. It would be no more surprising to learn that they favored the mail order business or the parcel post, since these are no more calculated to eliminate the middleman than is the formula paint law.

#### Three Considerations to Be Borne in Mind.

In this connection, I wish to call your attention to several facts that some of you may have overlooked:

1. The State can have no control over the procedure of manufacturers or distributors outside of its own borders. It can compel Pennsylvania manufacturers to publish their true formulas, but those of you who handle goods manufactured outside of the State are alone responsible to the authorities for the correctness of the formulas on the goods sold by them.

2. Every large manufacturer, of course, knows pretty closely the chemical composition of his competitors' goods, but he does not know what I may call their mechanical composition. To illustrate—it was only through the friendly relations established by the Paint Manufacturers' Association that the Eastern manufacturers learned that their Western brethren were using for certain purposes, not ordinary whiting, as indicated by the chemical analysis, but a

natural product known in the trade as "mineral primer." Another instance is the use of asbestos, which analyzes practically the same as talc. Still another is a flat white manufactured in this city. I defy any paint chemist, from chemical analysis, to explain why it is flat. But with the formula on the can all these individual advantages will be revealed, so that any one can guarantee to duplicate any formula.

3. The formula requirement is exceedingly difficult and expensive to the large paint manufacturers, but to the smaller manufacturer it is impossible, and if they could afford the services of a competent chemist they could not obtain him. There are in the United States about 400 manufacturers who will require not merely chemists but expert paint chemists if these laws prevail, and I am quite sure that there are not available 100 men competent for the work. On the other hand, if the law is not to be a mere grafting law for the benefit of the politicians, the States themselves will need specialists in paint chemistry to enforce the law; and I assert, without fear of contradiction, that no chemist except a specialist is competent to analyze paint.

#### An Opening for Irresponsible Parties.

Now, let us apply these considerations to your own business. In certain of the Western States where this law is already in operation, irresponsible parties in neighboring States are already setting up little mail order houses, offering to sell direct to the consumer, at cut prices, goods guaranteed to be made according to the formulas of the leading houses. And they will get the trade, unless some of the larger mail order houses see the point and go after it in the same way. With the formula on the can good-will goes for nothing, and every dollar spent for advertising is for the benefit of the formula rather than of the name and its good-will.

#### In View of the Real Difficulty of Complying with Such a Law—

—a difficulty which there is no need to dwell upon here—the smaller manufacturer must either follow the easiest course by copying simple formulas, or get out of business. It is easy to see that he will be forced out in due time anyway. The larger manufacturer will stop improvement, since any improvement he makes must at once be published to his competitor, and every time he makes a change in his formula he must change all his labels.

He may do this for a time, but in the end he will choose the easiest and cheapest way, and all formulas will eventually be the same. One large house that for half a century made excellent paints along a certain line of formulas, on the passage of the North Dakota law simply threw up its hands and revised its entire list to the lead and zinc basis—and I do not believe that the change was an improvement.

#### Eventually a Paint Trust.

The final result of all this must be a paint trust; for when formulas are reduced to a single standard and that standard known, the margin of profit will be on the known cost of production, and competition will make this margin so small that nothing but a large, well organized trust handling an immense tonnage can afford to handle it. Such an organization will have no use for middlemen.

#### An Unjust Law.

Finally, the law is not just. The State has no moral right by a stroke of the pen to destroy the good-will of a great industry. Politicians do not care much for abstract justice, but they do listen very attentively to the voice of the business man and voter, and you can, if you wish, prevent this injustice by a united protest.

#### A Dollar's Worth for a Dollar.

If the Paint trade is peculiarly evil, which I do not for a moment admit, there are other and less fatal ways of curbing arrant fraud. A law forbidding misrepresentation and requiring the net weight or net measure of the contents to be stated on the can would accomplish all that it required, or ought to be demanded. It would insure a dollar's measure for a dollar, and would prevent the use of the term "white lead" on anything but white lead, and so on through the entire list of materials; but it would not destroy the incentive to improvement, nor reduce the sale of Paint to the basis of Kerosene, Steel Nails, and Binding Twine.

These considerations are most earnestly commended to your good judgment.

#### CONVENTION NOTES.

Practically all the Philadelphia manufacturers cordially invited the visitors to inspect their plants, an opportunity which was very generally taken advantage of. Jobbing houses were also thronged with callers, and many enjoyed the pleasure of seeing the model Hardware store of F. C. Goodwin, Germantown, which commands the admiration of visitors.

The Coldwell Lawn Mower Company, Newburgh, N. Y., had a handsome display of Lawn Mowers which

were given away by lot on the last day of the convention.

Miniature packs of playing cards were distributed by T. McMurray and G. W. Diehl of the James C. Lindsay Hardware Company, Pittsburgh.

The Postal Telegraph Company extended to visitors the free use of its lines for messages of a personal and social character.

The Monarch Typewriter Company, which had a booth at the exhibit, furnished the stenographer for the convention and transcribed all notes.

The Supplee Hardware Company, Philadelphia, had three handsome booths at the show, one devoted to Metalware, one to Sporting Goods and the third to Lawn Mowers, Tools, &c. The company conducted a guessing contest in connection with its exhibit which aroused a great deal of interest.

Two exhibits out of the ordinary were those of E. C. Atkins & Co., Indianapolis, Ind., and the Oneida Community, Oneida, N. Y. Both these houses had representations of a Hardware store window dressed to feature their lines. The Atkins window was brilliantly lighted and contained, in addition to a fine display of Tools, an automatic figure sawing wood. The Oneida window showed a realistic winter scene embodying the company's line of Game Traps.

Henry Disston & Sons had a large and elaborate display especially featuring the smaller varieties of Tools they make which the trade does not associate with their name as closely as their line of Saws. These include Levels, Squares, Screwdrivers, Planing Knives, Cloth Knives, Gauges, Machinists' Tools, &c. In another booth machinery was installed showing a large metal cutting Saw in operation.

The Abram Cox Stove Company, Philadelphia, showed in its extensive exhibit the largest furnace it makes, which has a 72-in. casing, a 40-in. firepot and an equivalent heating capacity of 150,000 cu. ft. Inside the furnace was a talking machine which described its merits every time the door was opened, thus justifying the claim, "It speaks for itself." The company also showed its Princess Novelty Range for coal or gas which has gun metal top, requiring no blacking.

#### HARDWARE EXHIBITION.

The Hardware Show, held in the First Regiment Armory, about ½ mile from the hotel was a splendid exhibition, and was excellently managed. It was open morning and evening, but closed in the afternoon so as not to interfere with the business sessions. The public were rigorously excluded from the exhibit, J. C. Strubel, Germantown, filling the arduous post of doorkeeper throughout the week.

Special efforts were made by the officers of the association to induce members to place orders with the exhibitors, and from reports received considerable business was done. Some manufacturers, however, solicited no orders, using their space merely as a headquarters where they could meet the trade and adequately display and explain their product to those interested. Following is a complete list of the exhibitors, the lines shown and the representatives in charge:

ALABASTINE COMPANY, Grand Rapids, Mich.: Alabastine sanitary, durable wall finish. Represented by G. H. Krauenberg, A. D. Hooper and Mr. Pease.  
ALUMINUM COOKING UTENSIL COMPANY, Pittsburgh: Wear-Ever line of Aluminum Ware. Represented by A. E. Bergoline. Souvenir, Aluminum dish.  
AMERICAN CAN COMPANY, New York: Tin and Galvanized Ware, Seamless Lead Kegs, Sanitary Jar Caps, Steel Jacketed Cans, Canco Garbage Cans and Tin Roofing Caps. Represented by B. Barnef, J. T. Prince, A. J. Scheel, A. H. Buckley, C. Macfarlane and E. W. Bromilow.  
AMERICAN PULLEY COMPANY, Philadelphia: Exhibit of Sash Pulleys, Belt Pulleys and Pressed Steel Shapes.  
AMERICAN STEEL & WIRE COMPANY, New York: American and

Ellwood Fence. Represented by L. A. Dietrich, S. N. Lippincott, J. D. Sankey, A. W. Froude and C. L. Tite.  
E. C. ATKINS & Co., Indianapolis, Ind.: Display of Saws for all purposes, Trowels, Bit Braces, &c., with automatic window display suggestion. Represented by A. S. Bailey, D. R. Branson, R. B. Eston and R. J. Cant. Souvenirs, Spoons, Watch Fobs and Stick Pins.  
ATLANTIC REFINING COMPANY, Philadelphia: Oils, Greases, Lamps, Heaters and Stoves. Represented by F. L. B. Richdale and F. Vander Beucken.  
BERRY BROS., Detroit, Mich.: Varnishes. Represented by G. F. Klock, F. W. Horman, J. T. Barnitz, J. Hunt, G. N. Kerr and W. F. Warriner.  
BIDDLE HARDWARE COMPANY, Philadelphia: Exhibit of Lawn Mowers, Builders' Hardware, Cutlery and Tools. Represented by W. B. Parker and large staff.  
BOSS WASHING MACHINE COMPANY, Cincinnati, Ohio. Boss Quick, 1904, Automatic Boss Double Acting Banner Rotary and Bossco Water Motor Washing Machines. Represented by C. W. Magill.  
JAMES BOYD & BRO., Inc., Philadelphia: Longlength Garden Hose and accessories. Represented by E. F. Brownworth and W. L. Booth.  
BRIDGEPORT CHAIN COMPANY, Bridgeport, Conn.: Exhibit of Chain of all kinds. Represented by J. M. Sherwood, A. B. Way and N. A. Petry.  
GEO. H. BUCHHEIMER, Baltimore, Md.: Exhibit of Dog Collars, Whips and Leads and Leather Specialties. Represented by G. H. Buchheimer.  
WILLIAM T. BUCK, Freehold, N. J.: Freehold Stove Truck. Represented by C. W. Golden.  
BUFFALO SLED COMPANY, Buffalo, N. Y.: Fleetwing Steering Sled and Gifford Snow Shovels. Represented by A. E. Bergoline.  
BURGESS-NORTON MFG. COMPANY, Geneva, Ill.: Black Eagle Tools. Represented by W. P. Vrooman.  
CARBORUNDUM COMPANY, Niagara Falls, N. Y.: Exhibit of Sharpening Stones and Abrasive Cloth sold by the hardware trade. Represented by H. J. Davis, Chas. Nicholson and L. M. Haskins. Souvenirs, Hat Pins and Scarf Pins with carborundum crystal heads.  
CARRIAGE & TOY COMPANY, Baltimore, Md.: Lawn Swings, Settees and Folding Chairs. Represented by F. Wissig and E. G. Boss.  
CARTER WHITE LEAD COMPANY, Chicago: White Lead. Represented by J. C. Sipple and E. J. Carr.  
CHALLENGE MACHINE COMPANY, Philadelphia: Challenge Grinders, Gruva Emery Wheel Dresser, Door Stops and Huntington Dressers. Represented by J. W. King.  
COLDWELL LAWN MOWER COMPANY, Newburgh, N. Y.: Lawn Mowers, &c. Represented by I. B. Sweigart, G. P. Tiffany and W. H. Coldwell.  
CONTINENTAL COMPANY, Detroit, Mich.: Screen Doors, Window Screens and Sherwood Metal Frame Screens. Represented by E. E. Bentley.  
COLUMBUS WOODEN WARE COMPANY, Columbus, Ohio: Acme Washing Machines. Represented by F. H. Taylor and F. E. Jack.  
CORBIN CABINET LOCK COMPANY, New Britain, Conn.: Padlocks, Cabinet Locks, Letter Boxes, &c. Represented by E. C. Griswold, D. E. Brainerd and G. F. Taylor.  
ABRAM COX STOVE COMPANY, Philadelphia: Complete line of Stoves, Ranges and Furnaces. Represented by a large staff.  
DE LAVAL CREAM SEPARATOR COMPANY, New York: Cream Separators. Represented by E. A. Savage, C. F. Moyer and A. W. Fletcher. Souvenir, Match Safe.  
FERDINAND DIECKMAN COMPANY, Cincinnati, Ohio: Exhibit of Dieckman Flat Crimp, Conductor Elbows, Shoes, &c.  
HENRY DISSTON & SONS, Philadelphia: Display of Saws of all kinds, Trowels, Files and small tools. Also separate exhibit of Premier inserted tooth metal cutting Saw in operation. Represented by H. C. Disston, J. M. Cole, S. Batty and Geo. Koon.  
JOSEPH DIXON CRUCIBLE COMPANY, Jersey City, N. J.: Dixon Graphite products. Represented by W. J. Coane, A. R. Lloyd and A. J. Pfaff. Souvenirs, Pencils.  
EAGLE LOCK COMPANY, Terryville, Conn.: Exhibit of Padlocks, Cabinet Locks, Night Latches and Wood Screws on sample boards. Represented by G. W. Carter and J. H. Brenner.  
ENTERPRISE MFG. COMPANY, Philadelphia: Meat Choppers, hand and electric Coffee Mills, Mrs. Potts' Irons, Sausage Stuffers, Tobacco Cutters, Lawn Sprinklers, Cherry Stoners, Bone Mills, Flag Pole Holders, Bung Hole Boreers, &c. Represented by J. W. Gates and staff.  
ESTATE STOVE COMPANY, Hamilton, Ohio: Estate Stoves and Ranges.  
FELTON, SIBLEY & Co., Philadelphia: Line of Package Paints, Varnishes, Stains, &c. Represented by J. H. Hackett, W. J. Sheive and T. F. West. Souvenir, Desk Calendar.  
FISHER & NORRIS, Trenton, N. J.: Exhibit of Eagle Anvils and Vises, including new line of Fisher-Brooks Bench Vises, stationary and swivel base. Represented by Mrs. Clark Fisher and H. F. Brooks.  
J. E. FRICKE COMPANY, Philadelphia: Exhibit of Ropes, Twines, Sash Cord, Binder Twine, Sisal Traces and Ties, &c. Represented by J. E., C. E. and W. S. Fricke and staff.  
GARY IRON & STEEL COMPANY, Cleveland, Ohio: Exhibit of Roofing, Tin Plate, Expanded Metal Lath, Conductor Pipe, &c. Represented by G. W. Scott, J. C. Wicks and J. A. Davies.  
GERMANTOWN TOOL WORKS, Philadelphia: Sample boards of Germantown Tools, Hammers, Hatchets, &c. Represented



- by C. F. Griffith, P. A. Griffith, J. C. Stine, T. F. Mulford, H. F. Crease, M. B. Taylor and J. C. Stine, Jr.
- GILLETTE SALES COMPANY, New York: Electrically illuminated display of Gillette Safety Razors and advertising supplies. Represented by J. F. Rebuck. Souvenir, Pocket Mirror.
- HAGERTY EXTENSION RULE COMPANY, Rural Valley, Pa.: Hagerty's Extension Rule. Represented by J. J. Johnston.
- M. HARTLEY COMPANY, 315 Broadway, New York: Union Metallic Cartridge Company's Ammunition and Remington Arms Company's Rifles and Shotguns. Represented by O. S. Sked and H. Overbaugh.
- HOFFMAN-CORR MFG. COMPANY, Philadelphia: Hammocks, Rope, Twine, Sash Cord, Cotton Mops, Waste, Tape, Sewing Twine, &c. Represented by W. P. Welkert, C. P. Roane and W. F. Harris.
- HOHLFELD MFG. COMPANY, Philadelphia: Exhibit of Hammocks and Couch Hammocks. Represented by H. L. Hohlfeld, F. P. Hill and N. W. Campbell.
- R. M. HOLLINGSHEAD COMPANY, Camden, N. J.: Leather Dressings, Soaps, Oils, Metal Polishes and Krystal Solloff hand cleaner. Represented by E. T. Williams and Geo. Sonneborn.
- HOUSEHOLD SUPPLY COMPANY, Greensburg, Pa.: Ever-Ready Iron Stand and Handy Waxing Pad. Represented by Frank Good.
- IRWIN AUGER BIT COMPANY, Wilmington, Ohio: Auger Bits. Represented by W. B. Vrooman.
- KNEUFFEL & ESSER COMPANY, 127 Fulton street, New York: Measuring Tapes and Builders' Transits. Represented by E. C. Bevier.
- LASHER MFG. COMPANY, Davenport, Iowa: Spring-In Handle Pot Covers and Cabinets, Kitchen Kumfort Plate Scrapers, Beaters, Roasters, Graters, Frying Pans and other specialties. Represented by E. C. Greeley.
- W. W. LAWRENCE & CO., Pittsburgh: General line of Paints, Represented by H. G. Porterfield and S. L. Brown. Souvenir, Paper Clip.
- LOWE BROS. COMPANY, Dayton, Ohio: Exhibit of advertising supplies furnished to the trade. Represented by W. Bennett, H. S. Wauters, M. B. Roberts and C. G. Fisher.
- JOHN LUCAS & CO., Philadelphia: Lucas Paints, Enamels, Varnishes, Stains and Brushes. Represented by F. N. Johnson, H. C. Morse, R. E. Rake and N. J. Goudy.
- LUTHER BROS. MFG. COMPANY, Milwaukee, Wis.: Carborundum Tool Grinders. Represented by J. J. Snapper.
- MAR-MORA SALES COMPANY, Philadelphia: Marmora Invisible Mender. Represented by V. F. Van Stan.
- MILLER LOCK COMPANY, Philadelphia: Comprehensive exhibit of retailers' assortments of Padlocks to sell at standard prices, which are regulated to show a profit for both jobbing and retail trade. Represented by E. S. Jackson and staff.
- JOHN M. MELLOY'S SONS, Philadelphia: Sheet Metal Ware. Represented by G. M. Missimer and G. G. Melloy.
- MERCHANT & EVANS COMPANY, Philadelphia: Tin Plate, Solder and Babbitt, Metal Shingles, Star Ventilators and Star Metal Automobile Tire Case. Represented by J. M. Rose, Wm. Schuler, H. B. Marshall, H. B. Peddrick and Mr. Taylor.
- MEYERS FOUNDRY & MFG. COMPANY, South Bend, Ind.: Lundy Double Blast Soldering Furnace. Represented by E. C. Waring.
- MONARCH TYPEWRITER COMPANY, Philadelphia: Monarch Typewriters.
- NATIONAL CASH REGISTER COMPANY, Dayton, Ohio: Cash Registers, one being automatically operated by electricity. Represented by J. T. Watson and staff. Souvenir, Stick Pin.
- NATIONAL CABLE & MFG. COMPANY, Niles, Mich.: Exhibit and demonstration of Lightning Rods.
- NATIONAL FILE & TOOL COMPANY, Philadelphia: Vixen Milling Tools. Represented by H. Rawcliffe, E. M. Lowy, E. J. Connell and Mr. Whitehead.
- NEW JERSEY WIRE CLOTH COMPANY, Trenton, N. J.: Galvanized Wire Cloth, Wire Screen Cloth, Poultry Netting, &c. Represented by W. K. Paff, B. J. Fisher, G. W. Downs and D. M. Anderson. Souvenir, Pocket Book.
- NORTH BROS. MFG. COMPANY, Philadelphia: Yankee Tools and Gem, Jumbo, Lightning and Blizzard Ice Cream Freezers. Represented by A. C. Albrecht, James Kinsman, F. A. Mutchmore and staff.
- OHIO VARNISH COMPANY, Cleveland, Ohio: Chi-Namel Varnishes in gloss and mission finishes and self-graining process. Represented by C. F. Wentzel, N. Kramer, W. H. Hetrick and J. S. Miller.
- O. K. MFG. COMPANY, Buffalo, N. Y.: O. K. Stove Pipe Thimble. Represented by W. P. Vrooman.
- ONE MINUTE WASHER COMPANY, Sandusky, Ohio: One Minute Washer. Represented by J. B. and T. E. Unks.
- ONEIDA COMMUNITY, Oneida, N. Y.: Window display suggestion introducing Game Traps and Community Silverware in cases. Represented by F. H. Primo, A. E. Kinsley and J. R. Reidel.
- PENN HARDWARE COMPANY, Reading, Pa.: Display of Builders' Hardware on sample boards. Represented by A. A. Devlin, J. R. Cotterel and Frank West.
- PENNSYLVANIA PAINT & GLASS COMPANY, Pittsburgh: Paints, Varnishes, &c., made by Acme White Lead & Color Works, Detroit, Mich., and Blackburn Varnish Company, Cincinnati, Ohio. Represented by N. Bruske, C. Nichols and H. Thurston. Souvenir, Memorandum Book.
- PERFECTION WRENCH COMPANY, Port Chester, N. Y.: Perfection Combination Pipe and Monkey Wrench. Represented by E. J. Dalton and Geo. Moger.
- PHILADELPHIA LAWN MOWER COMPANY, Philadelphia: Lawn Mowers. Represented by W. K. Hawks, A. J. Arader and S. Ancer. Souvenir, Calendar.
- PIKE MFG. COMPANY, Pike, N. H.: Sharpening Stones of all kinds, Knife Hones, Grinders, &c. Represented by H. W. Busler, H. Conner and J. A. Winters.
- PITTSBURGH STEEL COMPANY, Pittsburgh, Pa.: Pittsburgh Perfect Fence, Nails, Wire, &c. Represented by D. O. Hutchinson, Wm. Taylor, P. C. Bigelow, E. Franklin and J. H. Caswell. Souvenirs, Erasers.
- FAYETTE R. PLUMB, Inc., Philadelphia: Display board exhibit of Hatchets, Hammers and heavy tools. Represented by H. A. Terry.
- T. C. PROUTY COMPANY, Albion, Mich.: Parlor Door Hangers, Double Acting Hinges and Builders' Hardware. Represented by F. B. Coates.
- QUAKER CITY RUBBER COMPANY, Philadelphia: Hose and mechanical rubber goods. Represented by W. D. Purcell, H. Rittenhouse and H. H. Longwill.
- READING HARDWARE COMPANY, Reading, Pa.: Display of Builders' Hardware, Lawn Mowers, Electric Fixtures and portables. Represented by J. E. Harbster, J. C. McDonald, Wm. Wolf, G. B. Harbster and R. C. Hutchinson.
- REID-EDELMUTH MFG. COMPANY, Brooklyn, N. Y.: Champion Triple-Action Ice Cream Freezer, Champion Egg Beater, Screwdrivers and Cutlery. Represented by T. A. Reid, W. C. Roberts-Horsfield and J. N. Beekman. Served ice cream made in the booth.
- ROCKAWAY COASTER COMPANY, Cincinnati, Ohio: Rockaway Snowless Sleds, Flexible Sleds and Automobile Sleds. Represented by J. H. Winter.
- THOMAS SAVILL & SONS, Philadelphia: Savill Patent Faucets for sinks and wash trays. Represented by R. G. and T. M. Savill.
- SIMONDS MFG. COMPANY, Fitchburg, Mass.: Exhibit of a complete line of Saws and Saw Tools, Hack Saws, Files, &c. Represented by G. T. Curtis, R. A. Patterson, W. E. Cully, F. L. Mercier, R. W. Baldwin and J. E. Kelley.
- SPEARS & RIDDLE COMPANY, Wheeling, W. Va.: Ideal Power Washer. Represented by S. Brown and D. W. Martin.
- STANDARD HORSE SHOE COMPANY, Boston, Mass.: Horseshoes. Represented by G. S. Boutwell and staff of H. W. Middleton Company, Philadelphia. Souvenir, Match Safe.
- STANLEY WORKS and HART & COOLEY COMPANY, New Britain, Conn.: Wrought Steel Butts, Hinges, Brackets and Bolts and Wrought Steel Registers. Represented by A. E. Duncan, A. E. Davis and S. McClelland.
- STEWART & ROMAINE MFG. COMPANY, Philadelphia: Display board exhibit of Expansion and Toggle Bolts. Represented by N. H. Stewart, 2d, and S. J. Stern.
- SUPPLEE HARDWARE COMPANY, Philadelphia: Three exhibits, including Pennsylvania Lawn Mowers, Fishing Tackle, Granite Ware and special brand goods. Represented by a large staff.
- THOMAS, ROBERTS, STEVENSON COMPANY, Philadelphia: Active Fortune line of Ranges and Furnaces. Represented by R. T. Garrett and C. P. Paige.
- TOLEDO SCREEN COMPANY, Toledo, Ohio: Peter Screens and Screen Doors. Represented by A. J. Cone and H. L. Haskell.
- EDW. K. TRYON COMPANY, Philadelphia: Exhibit covering a complete line of Sporting Goods. Represented by a large staff.
- EDWIN C. WALKER, Urbana, Ohio: Vaughn's Screwdrivers. Represented by W. P. Vrooman.
- WEST HAVEN MFG. COMPANY, New Haven, Conn.: Universal and Quality Hack Saws with machine in operation. Represented by A. A. Twichell.
- GEO. D. WETHERILL & CO., Inc., Philadelphia: Wetherill's Atlas and Master Painters' White Lead, with specialties, sundries and advertising matter. Represented by C. T. Wetherill and B. W. Cooper.
- WILLIAMSON BROS. COMPANY, Philadelphia: Marine Hardware, Steering Gears and Electric Hoists. Represented by C. H. Cushman.
- HENRY L. WILSON'S SONS COMPANY, Philadelphia: Wilsonoid Rubber Asphalt Wool Roofings. Represented by W. H. Smith, A. E. King and W. C. Juram.

CHARLES WEILAND, 149 Chambers street, New York, wholesale Hardware and kindred lines, has put in stock a comprehensive assortment of automobile and motor boat tools and accessories. He has now in preparation and soon to be issued a special 100-page illustrated descriptive catalogue which will contain such articles as Automobile Tool Kits, Tire and Top Covers, Pumps, Oilers, Socket Wrenches, Goggles, Tool Bags, Gas Connections, Bottles for hot and cold liquids and the innumerable specialties incidental to the line.

THE M. HARTLEY COMPANY, 313-315 Broadway, New York, has on exhibition in one of its windows a Remington Auto Loading Shotgun, which was cleaned up after it had been submerged in water and sand for two years and now works perfectly.

## IOWA RETAIL HARDWARE ASSOCIATION.

Last year proved one of the most successful in point of growth ever enjoyed by the Iowa organization. There were added to the roster since the last annual convention 234 new names, which brings the membership at this time up to 931. The Iowa Association is, therefore, now entitled to a representation in the National Convention of 10 delegates, and has within its fold nearly 60 per cent. of all of the Hardware dealers in the State.

Des Moines, the meeting place of the eleventh annual convention of the Iowa Retail Hardware Association, held February 8 to 12, inclusive, fell within the zone of a swirling, snow-burdened blizzard that from Monday until early Wednesday morning raged through the Northwest, causing in the meantime a practical suspension of traffic.

When at 1.30 p.m., Tuesday, the hour set for the opening of the convention, President De Vol called the meeting to order, only a handful of members were present. Many were deterred from beginning the journey, while a large number of those en route were snowbound or otherwise delayed by the storm, and it was decided, therefore, to adjourn until the same hour of the following day, when the programmes for both days were consolidated.

### Nearly 500 Members Present.

Favored by one of those swift climatic changes in which the tempered breath of early spring sometimes follows close in the wake of icy blasts that sweep over the unobstructed levels of the Middle West, the remaining days of the convention were bright with the warmth

Des Moines Hardware Club to make the convention a success. Continuing, the president spoke in part, as follows:

Our membership continues to increase in a manner most gratifying to us all. During the past year we have enrolled 234 new members, and in so doing have fulfilled our highest expectations in this direction; it leaves us to-day the strongest retail organization in the State, and we are now third only in membership of all the retail Hardware associations in the United States.

The National has likewise shown a creditable increase. It has also accomplished much in persuading manufacturers to sell their products through regular channels and to recognize the retailer as the proper agent for the distribution of their goods. They are realizing more and more each year that the retailer is the man behind the gun, and this idea is being continually emphasized by the National Association.

### Experiment in Parcel Post.

We are aware of the fact that the parcel post matter is still before us, and while the National Association has done a great deal to bar its progress, we are facing a bill now before the Lower House which asks Congress to establish an experimental parcel post in four counties in the



A. R. SALE.



P. C. DeVOL.



L. C. ABBOTT.



E. C. BARBOUR.

of winter sunshine; to this fortunate circumstance was due the large attendance which at all subsequent meetings filled the assembly hall. The registration of members and guests ran something over 700, of which about 500 were members. Business sessions were held in the afternoon of each day only, during which hours the exhibition hall remained closed.

An address of welcome, delivered by Lafe Young, Jr., representing the Greater Des Moines committee, preceded the taking up of the practical work of the convention. This was responded to by President De Vol, who expressed his appreciation of the efforts of the Commercial Club and of the Greater Des Moines committee to provide for the welfare and comfort of the city's guests.

### President's Address.

President P. C. De Vol, Council Bluffs, in his annual address expressed his pleasure and gratification at the large attendance gathered in face of the difficulties encountered, observing that nothing short of a deep seated loyal interest in the welfare of the association would have induced so many to brave the discomforts and inconvenience of travel through such a storm. The enterprising spirit shown by exhibitors whose efforts contributed so much to the success of the convention was warmly commended, and the hope was expressed that members would manifest their appreciation of the co-operation of these interests by extending a liberal patronage to them.

Especial mention was made of the efficient work of Secretary A. R. Sale and the untiring efforts of the

United States, the experiment to close on December 31, 1909, when a report shall be made to Congress of the results. This bill is an entering wedge which will eventually widen the breach to suit the catalogue people who are pushing it, and we must therefore be doubly alert to see to it that our interests are not harmed. We should do all in our power to prove to the American public that this is one of the most unwise pieces of legislation ever proposed for the interests of the people at large.

### Business Conditions.

Reviewing the business of the year just closed, we find that throughout Iowa it compares favorably with the business of 1907. Generally speaking, the year was good, and the indications are that business during 1909 will show a marked improvement over 1908, and I trust you will not be disappointed in my prediction.

### Report of the Secretary.

Reviewing the events of the past year Secretary Sale in his annual report outlined the steps of progress made by the association within this period. The various matters of interest to the organization, which occupied the attention of the executive officers and committees were touched upon in a way that gave the members some idea of the unremitting work that is being done in their behalf and the benefits accruing therefrom.

### Conference of Hardware Association Secretaries.

Special reference was made to a meeting of State Hardware Association secretaries, held August 28 and 29 at Mason City, Iowa, for the purpose of conference. This meeting was attended by the secretaries of the North Dakota, South Dakota, Nebraska, Colorado, Missouri, Minnesota, Wisconsin and Illinois organizations. It was



decided at this meeting to hold like conferences annually, and the secretaries' meeting this year is to be held in Minnesota. The trend toward systematic methods in association work is aptly indicated in this movement which manifests a spirit of solidarity well calculated to bring out the best thought, ideals and plans to secure harmonious action.

#### Aims and Purposes of the Association Movement.

Touching the aims and purposes of the association, Mr. Sale classified them as Constructive, Protective and Educational. Constructive in that they create equitable methods of distribution by manufacturers and jobbers, and provide an economical, yet safe, system of insurance. Protective in guarding against unwise and hurtful legislation, and in securing for members concessions never before made by manufacturers and jobbers and in building up a great national body ever watchful against encroachments upon the domain of the retail trade of the country. Educational in providing an opportunity for meeting in convention, where through a common interchange of experiences, all may be instructed as to the best methods of buying, selling, advertising, taking of inventories, creation of departments and in all that is designed to promote the successful conduct of a Hardware store.

A warning was also sounded upon the danger threatened by the proposed establishment of an experimental parcel post, coupled with an appeal for vigilance against the danger threatened by this experiment.

#### Convention Committees.

The following convention committees were appointed by the president:

RESOLUTIONS.—J. C. Abbott, Marshalltown; W. B. Hunt, Sioux City; A. C. Veith, Oakland; C. J. Griffin, Montezuma.

NOMINATIONS.—S. R. Miles, Mason City; L. Kurtz, Des Moines; G. R. Keating, Mt. Airy; G. A. Bleber, Fort Atkinson; H. T. Vincent, Fort Dodge.

AUDITING.—E. C. Barbour, Ft. Madison; W. B. Baumgardner, Dubuque; F. R. Currie, Mason City.

EXHIBITS.—C. T. Gadd, Des Moines; C. E. Haas, Le Mars; J. F. Doty, West Liberty.

QUESTION BOX.—H. T. Vincent and the Board of Directors Press.—A. R. Sale, Mason City; F. H. Luthé, Des Moines; T. J. Camp, Des Moines.

EXCHANGE LISTS.—L. Lindenberg, Dubuque.

LEGISLATION.—Joseph Mattes, Odebolt; T. A. Nichols, Burlington; W. McQuiston, Muscatine; J. H. Petty, Elliot; H. P. Leible, Des Moines.

J. F. Doty, West Liberty; C. F. Schmidt, Marshalltown, and Joseph Martinek, Cedar Rapids, were appointed sergeants-at-arms.

#### Business Methods in the Store.

A paper on business methods presented by W. H. Stepanek, Cedar Rapids, outlined some of the basic principles of system which he regarded as essential in every well ordered retail business. This subject has been treated by Mr. Stepanek in a recently issued book entitled "Business Methods in a Hardware Store," the object of which is to teach the beginner the fundamental methods of practical business operations and to give the experienced merchant new ideas for application in his own business. Mr. Stepanek said, in part:

Retailing has become a science; not a fixed, but a progressive science. Good progress has been made in the raising of standards in retailing. At one time competition among retailers was largely confined to the question of price and to price cutting. The merchant has seen, however, that there are other factors besides prices in trade that can be made to appeal to the public; so that price has now become only one of the many keys upon which the successful retailer must play in order to win.

#### Other Factors to Be Considered.

Assortments, qualities, service, window and interior displays, shopping comforts and convenience, free delivery, a liberal exchange and refund system, original and ingenious publicity, to say nothing of attractive store entertainments, are all avenues more or less exploited by the modern retailer.

#### Success the Result of Persistent Effort.

Above all things else the successful retailer must be a hard, persistent worker. The time may have been when the shiftless, thoughtless, intemperate retailer could show a profit despite wasted hours spent in sitting on counters or on a drygoods box at the store door, with Jack Knife in hand whittling; or despite the loss of time wasted in barrooms or at card playing; but that time is past. No such retail mer-

chant, big or little, can hope to compete in these strenuous days with the army of faithful, industrious, tireless and scientific competitors. The price of success in this age in the retail world is eternal vigilance and concentrated intelligent effort. He who is not prepared to pay this price should seek some other calling.

#### An Exact System in a Retail Store

will reduce friction to a minimum in handling customers and aid in increasing sales, perhaps beyond any other single factor. What then about this system? It should avoid extreme simplicity on the one hand and red tapeism on the other, and further sales by a comprehensive and smoothly running system between the two extremes.

#### Mutual Fire Insurance.

No period of the convention was characterized by more general interest and enthusiasm than was developed in the hour devoted to the question of mutual insurance. The report of the secretary of the Iowa Hardware Mutual Fire Insurance Company, submitted at this time, showed \$2,500,000 of insurance in force, upon which, after paying \$50,000 in losses, dividends to the amount of \$34,358.18 were returned to policy holders, leaving cash assets in the treasury of \$30,445.56. Further significance is given to these figures by the statement that they represent a gain for the year of 1908 of 33 1-3 per cent. of insurance in force and an increase of 49 per cent. in cash assets.

In the course of a stockholders' meeting, which was led by S. R. Miles, many of the members testified as to the savings in premiums effected by this insurance and the satisfactory manner in which adjustments were made. It was also brought out in these talks that the influence of the Hardware mutuals were being felt in the reduction of old line rates in many places, thus demonstrating that the benefits enjoyed by its policy holders were not to be measured alone by the annual dividends.

#### The Question Box Discussions.

Under the inspiring leadership of H. S. Vincent, the Question Box periods were productive of live, snappy discussion, which brought out much valuable information relative to the management of various store departments, practical salesmanship and methods of accounting.

#### Operation and Management of Tin Shop

The question of the operation and management of the tin shop in connection with the Hardware store was freely discussed, and some interesting points developed. One member wanted to know how many of the merchants present really knew whether their tin shop departments were making or losing money.

In response to a call for hands it was shown that but comparatively few kept a perfect record of shop receipts and disbursements that would enable them to tell definitely what portion of the general gain or loss was properly chargeable to this department.

One merchant whose practice it was to keep a separate set of accounts for the tin shop explained his methods in detail, and made it clear that the savings effected more than compensated for the extra clerical work involved in keeping this account. Under this system he was able to make the head of the department responsible for its profitable operation, and to stimulate the manager's interest in it, a modified profit sharing plan was introduced.

The prevailing impression seemed to be that one of the most important leaks in the tin shop was the loss of time for which no adequate returns were ever rendered. Some of the various expedients adopted by different members for keeping track of shop time were described, but it was generally agreed that there was too much laxity in this respect in the average shop.

#### Guaranteeing Axes and Edge Tools.

Another topic which provoked animated discussion was that of guaranteeing Axes and edge tools. Arguments both for and against the practice were advanced. In the matter of Axes some invariably sold them without any guarantee, while others replaced those returned according to the terms of the maker's guarantee. It was evident that in the successful handling of this problem the equation of personal tact in the handling of customers was always an important factor.

#### Cream Separators a Hardware Line.

The demand for Cream Separators in the dairy districts has attracted the attention of the Hardware trade

with the results that these machines are now largely handled and sold through such agencies. The question was raised as to whether or not it was necessary to conduct a canvass in order to insure profitable results or whether they might be sold in the store like other goods. Quite a number of expressions were obtained upon this point, the consensus of which seemed to be that in order to establish a trade upon a particular line of Separators a preliminary canvass was, at least, necessary.

#### National President Stebbins' Address.

A. T. Stebbins, president of the National Retail Hardware Association, was storm bound, and did not arrive until Thursday morning. In his talk before the convention given in executive session, he reviewed the work being done by the National Association in furtherance of the ends and aims of the State units of which it is composed. Special emphasis was laid upon the fact that while the repeated discussion of such questions as were involved in the parcel post and catalogue house issues might seem monotonous, it was of vital importance that they be kept to the front since in the interests at stake the welfare, not only of each individual member was concerned, but that of their respective communities as well.

#### Mr. Burrows on Parcel Post.

Parcel post was the subject of an address delivered by Charles W. Burrows, Cleveland, Ohio, in the course of which he presented a convincing array of facts and figures in support of the contention that the introduction of the proposed parcel post service would enormously increase the postal deficit without securing a fair distribution of such benefits as might accrue; in other words, it would prove a burdensome tax upon the many for the convenience and enrichment of the few.

#### Entertainment.

A complimentary vaudeville entertainment was given in the Elks' new clubhouse on Thursday evening by the Des Moines Hardware Club, which is composed of the allied jobbing and manufacturing interests of the city. The programme, composed of five numbers, included vocal, instrumental and monologue selections, together with other features, all of which proved highly entertaining. Upon conclusion of the programme an excellent collation was served, after which a smoker afforded opportunity for social mingling. For the enjoyable evening thus spent, the members and guests were indebted to the zealous efforts of the Hardware Club's committee, composed of F. H. Luthe, C. S. Walker, W. S. Brown and L. A. Smith.

#### Robert Garland's Address.

The greetings of the American Hardware Manufacturers' Association were tendered to the convention by Robert Garland, Pittsburgh, president of that organization. Mr. Garland delivered an interesting address, from which we make the following extracts:

I am pleased to see so many Hardware merchants here, and am proud to say that our American Hardware Manufacturers' Association gladly recognizes and holds out the hand of good fellowship to the retail Hardware associations of this country. We realize that effective work can be accomplished by organization and co-operation. It is our pleasure to meet with our mutual friends, the Hardware jobbers, twice a year, once with the Southern Jobbers' and once with the National Jobbers' Association. We also have the great privilege at these conventions of meeting the representatives of your National Retail Hardware Association.

There is, of course, a great deal in common between our association and the Jobbers' Association, and the jobbers are our very good friends. They employ their large capital in all the sections of this great country in stocking our goods for distribution. You can understand that the individual manufacturer could not economically market his particular goods to the retail trade through his own efforts, so that the jobber who handles various lines of Hardware and disposes of them through his traveling men and ships from a nearby point has a well recognized position in the trade.

#### Manufacturer and Retailer.

The Hardware manufacturers, therefore, recognize the jobber as the natural distributor, and our relations with him are most cordial, but at the same time we also recognize that the retail merchant can assist or can hinder the sale or in-

roduction of goods for the reason that he is the medium through whom the consumer is reached. There is, therefore, a distinct connecting bond between the manufacturer and the retailer. On general lines of policy, or on national questions, our association goes along with yours.

The question of the parcel post, for instance, is one that is giving some concern, and especially so as the plan proposed may be simply an entering wedge for a more complete system, such as they have in England, and we are glad to join with the various retail Hardware associations as well as with the jobbers on this momentous question. On questions such as this you can count on any influence that our association may possess, as we believe that the Hardware manufacturer, jobber and retail merchant should go hand in hand as heretofore, and the interest of one is the common interest of all.

#### Merchandise Post a Blight.

It has been said that the inauguration of the parcel post would tend to injure the retail Hardware store, and we believe it. Some have gone so far as to say that a parcel post or a merchandise post system would tend to kill the commercial life of the smaller towns throughout the country. We believe this also. That may go in a country like England, a comparatively small territory in area not as large as the State of Iowa, but with a population 15 times as great, made up largely of cities, would not hold good in this great country of magnificent distances, and when one considers that a person may travel in a straight line through the State of Texas, as long a distance as from Paris to Constantinople, pretty well across Europe, we have an idea what this country is.

To do away with the commercial life of the towns and villages would be a death blow to their growth and a blight on the community, which would check the opportunities and ambitions of countless thousands, provoke an exodus to our cities of fellow citizens looking for work, who at present are not only satisfied with their environment but are growing in prosperity with the growth of the community.

Let us hope, therefore, that nothing so revolutionary as a merchandise post will be put into effect. It had a setback 10 days ago, but it will undoubtedly loom up again. The agitation of the tariff is sufficient for the present. The tariff, you know, is very close to the heart of the Pennsylvania manufacturer, and we are hopeful that such revisions as are made through the wisdom of Congress will not be too drastic or hurtful on their nature so that we can quickly adjust ourselves to the new conditions.

#### Election of Officers.

The official roster for the ensuing year is as follows:

PRESIDENT, L. C. Abbott, Marshalltown.

VICE-PRESIDENT, E. C. Barbour, Fort Madison.

SECRETARY-TREASURER, A. R. Sale, Mason City.

DIRECTORS: First District, E. C. Barbour, Fort Madison; Second District, Wm. Question, Muscatine; Third District, Thos. Larson, Eldora; Fourth District, Geo. A. Bleber, Fort Atkinson; Fifth District, L. C. Abbott, Marshalltown; Sixth District, Homer M. Duncan, Albia; Seventh District, C. T. Gadd, Des Moines; Eighth District, M. W. Keating, Afton; Ninth District, Theo. Peterson, Council Bluffs; Tenth District, Aug. Mueller, Webster City; Eleventh District, C. E. Haas, Le Mars.

An Executive Board consisting of the president and the last two ex-presidents was created to act in an advisory capacity with the president.

#### Resolutions Adopted.

Among the resolutions adopted by the convention were the following:

##### OPPOSITION TO PARCEL POST.

That we unanimously oppose any legislation favoring even a limited postal carriage of parcels, for we firmly believe that such limited service would prove to be but an entering wedge for a general service. Such rapid development has been seen in the second-class mail matter and in rural free delivery that it would be inevitable in this also, and would result in a very few years in deficits exceeding many-fold those already so evident in that deficit mill, the P. O. Department. We believe it would ultimately entail an expense so great as to stagger the resources of the Treasury.

##### ONE CENT RATE ON FIRST-CLASS MATTER.

We are favorable to the postal law reducing the present rate on first-class mail matter to 1 cent per ounce, and would recommend that such a law be passed by Congress. The letter rates of postage being a profit to the Government, and second-class matter a loss to the Government, it is certainly to the best interests of the country that a reduction in the postal rates be encouraged in the department that shows a carrying profit.

##### EXEMPTION OF PERSONAL EARNINGS.

Whereas, The statute relative to the exemption of personal earnings was enacted more than 30 years ago, at a time when this State was new and sparsely settled; and

Whereas, The exemption of the earnings of a debtor, who is a resident of the State and the head of a family, for his personal



service or those of his family, at any time within 90 days next preceding a levy, has been for a great number of years taken advantage of by persons receiving wages far in excess of what is sufficient for the support of themselves and family, to avoid the payment and thwart the collection of just claims against them; and

*Whereas*, Our sister States have from time to time modified their statutes relative to the exemption of personal earnings so as to meet the changed conditions of the times; as instances of which may be cited Missouri with its statute providing for the exemption of wages for 30 days prior to the levy, provided it is shown that they are needed for the support of the family of the debtor; Minnesota, providing for the exemption of wages for the same period to the extent of \$25; Nebraska, providing for the exemption of 90 per cent. of the wages due, and other states granting no exemption for wages; therefore be it

*Resolved*, That it is the sense of this association that a change should be made in the law of Iowa relative to the exemption of personal earnings, so that when such a change is made the retail merchants of the State will have some protection against that class of debtors who refuse to pay for family necessities; be it further

*Resolved*, That a copy of this resolution be mailed to all members of the Legislature now in session with a request for their support of Senate File No. 232 and House File No. 202, which have been presented and referred to the Committee on Commerce and Retail Trade in the Senate and to the Committee on Commerce and Trade in the House.

A resolution was also adopted providing for the appointment by the president of a committee of three members to revise the by-laws and report at the next annual meeting.

#### CONVENTION NOTES.

The prosperous condition of the Iowa Association is reflected in the financial statement submitted by Secretary-Treasurer Sale, which showed: Receipts, \$5739.35; disbursements, \$5025.26, leaving a balance in the treasury of \$714.09.

Instead of confining the business meetings of the convention to a single session in the afternoon, as has been the custom for several years, it was thought that more could be accomplished by holding two short sessions each day. This suggestion seemed to have the hearty approval of those present and it was accordingly referred to the Executive Committee for its consideration in making up the programme for next year.

Speaking from the viewpoint of a manufacturer, Walter Birge of Fayette R. Plumb, Inc., Philadelphia, expressed hearty approval of the work that was being done by the retail Hardware associations in combatting parcel post and other influences that would divert the distribution of goods from established retail channels. His remarks were roundly applauded.

A pleasing incident connected with the opening of the meeting on Wednesday was the presentation to the retiring president, P. C. De Vol, by the association of a beautiful ivory and ebony gavel bearing a silver plate inscribed with the recipient's name and the year dates of his incumbency. In voicing the feelings of confidence and esteem of which this token was simply a concrete expression, S. R. Miles paid a deserved tribute to the work done by Mr. De Vol during his two successive terms as president.

Representing the Council Bluffs Commercial Association, State Senator Charles J. Saunders extended a cordial invitation to the convention to hold its next meeting in that city. A like invitation was given by Lafe Young, Jr., who, representing the Greater Des Moines Committee, urged the convention to again accept the city's hospitality and return next year to Des Moines, where a new Coliseum would be at their disposal.

Telegrams expressive of good will and best wishes for a successful meeting were received from S. Norvell of the Norvell-Shapleigh Hardware Company, St. Louis, and Frank A. Bare, treasurer of the National Retail Hardware Association and secretary of the Ohio Hardware Association. Upon motion the secretary was instructed to send messages of like import to the State conventions

then in session, which included those of Connecticut, Florida, Oklahoma and Pennsylvania.

George H. Maxwell, whose eloquent plea of protest against those agencies which threaten the continued development of rural communities and who has been heard upon former occasions, was down on the programme for an address on "The Country Town Is the Hope of the Nation." The announcement by the secretary that Mr. Maxwell was unable to keep the engagement occasioned many regrets.

L. C. Abbott, Marshalltown, reported for the delegates to the last annual convention of the National Association at St. Louis. He did not attempt to go into detail, but made some general observations on the gathering, which were interesting and listened to with close attention and appreciation.

#### EXHIBITORS.

This year's Hardware show, held in connection with the convention, outranked its predecessors in the number of exhibitors and in features of attractive interest. Not only was every nook and corner on both floors of the Shrine Temple utilized, but applications for space from nearly half a hundred manufacturers and distributors had to be refused for want of room, this, too, in the face of the fact that the booths were subdivided into the smallest practicable divisions.

A feature of this exhibition which could hardly escape the notice of even casual observers is the increasing number of manufacturers within the State who are finding in these convention displays an effective means of bringing their products to the attention of the retail trade. Many of the articles shown were new and therefore of special interest to up to date merchants who are seeking to keep abreast of the times.

So far as the Iowa association is concerned the popularity of these displays is firmly established, but lack of adequate quarters in which to properly stage them has of late years been a serious handicap to still more ambitious efforts in this direction on the part of manufacturers. Fortunately, however, this drawback is soon to be removed. It was announced to the convention by a representative of the Greater Des Moines Committee that plans are now nearly completed and construction work will soon be begun on a new coliseum designed to hold 10,000 people, and which will have an arena 170 x 210 ft., together with a large convention hall and committee rooms for the accommodation of such gatherings. This structure, it was stated, will be completed and at the disposal of the association for convention purposes next year if Des Moines should be chosen as the place for the next annual meeting. This will assure ample space for the accommodation of all interests desiring to make exhibits.

A list of the exhibitors follows:

- E. C. ATKINS & Co., Indianapolis, Ind.: Saws. Represented by T. F. Barbour.
- AUTOMATIC ELECTRIC WASHER COMPANY, Newton, Iowa: Automatic Electric Washer. Represented by C. W. Smith.
- ACME WHITE LEAD & COLOR WORKS, Detroit, Mich.: Mixed Paints, Varnish and Enamel. Represented by Alan H. Fisher.
- AMERICAN STEEL & WIRE COMPANY, Chicago: Wire Fence. Represented by T. H. Fuller, L. P. Rider, R. A. Beak, E. M. Ryan, H. A. Parks and L. J. Brown.
- BOSTON VARNISH COMPANY, Boston and Chicago: Kyanize Floor Finish. Represented by W. H. Nielsen.
- COLDWELL LAWN MOWER COMPANY, Newburgh, N. Y.: Lawn Mowers. Represented by G. S. Metcalf and J. T. Bullen.
- CONTINENTAL LAMP COMPANY, Davenport, Iowa: Kerosene and Alcohol Lamps.
- CARBORUNDUM COMPANY, Niagara Falls, N. Y.: Abrasive Material. Represented by Geo. E. Dressler, Geo. L. Budroe and George N. Allen.
- CHADBORN & COLDWELL MFG. COMPANY, Newburgh, N. Y.: Horse and Hand Lawn Mowers. Represented by H. H. Wallis.
- DES MOINES STOVE REPAIR COMPANY, Des Moines, Iowa: Represented by J. B. Green.
- DENNING WIRE & FENCE COMPANY, Cedar Rapids, Iowa: Woven Wire Fencing and Portable Corn Cribbs. Represented by S. H. Matterson.
- DES MOINES INCUBATOR COMPANY, Des Moines, Iowa: Incubators and Poultry Supplies. Represented by E. Hardessen.

- DEXTER MFG. COMPANY**, Dexter, Iowa: Dexter Washer. Represented by E. A. Kizer.
- DUTRO MFG. COMPANY**, Mason City, Iowa: Sash and Door Holder. Represented by G. A. Green.
- DOVER MFG. COMPANY**, Canal Dover, Ohio: Asbestos Sad Irons. Represented by M. H. Snyder.
- E. I. DU PONT DE NEMOURS POWDER COMPANY**, Chicago, Ill.: Ammunition. Represented by W. D. Stannard and W. S. Magill.
- DE LAVAL SEPARATOR COMPANY**, Chicago: De Laval Separators. Represented by C. W. McMann, Harry Davenport, J. A. Crowther and H. A. Swager.
- ELEVATED CLOTHES DRIER COMPANY**, Sheldon, Iowa: Represented by H. O. Fritts.
- EMPIRE CREAM SEPARATOR COMPANY**, Chicago, Ill.
- ELECTRIC HEAT REGULATOR COMPANY**, Minneapolis, Minn.: Automatic Heat Regulator. Represented by C. S. Doyle.
- ELLIOT MFG. COMPANY**, Warren, Ill.: Anti-Rusting Tinware. Represented by T. M. Brenner and Roy Blake.
- J. B. FORD COMPANY**, Wyandotte, Mich.: Dairyman's Cleaner and Cleanser. Represented by F. E. Branch and C. C. Lowitz.
- FULLER-WARREN COMPANY**, Milwaukee, Wis.: Stewart Stoves and Ranges. Represented by W. B. Barney, G. C. Barney and J. L. Potter.
- GENERAL COMPRESSED AIR & VACUUM MACHINERY COMPANY**, St. Louis, Mo.: Thurman Portable Electric Vacuum Cleaner. Represented by C. F. Wilkerson.
- GABEL MFG. COMPANY**, Hawkeye, Iowa: 20th Century Pig Forceps. Represented by W. A. Hathaway.
- GREEN FOUNDRY & FURNACE WORKS**, Des Moines, Iowa: Hot Air Furnaces. Represented by J. O. Green, C. L. Burch and P. C. Jones.
- GEM CITY STOVE MFG. COMPANY**, Quincy, Ill.: Represented by Harry H. Smith.
- GLOBE MFG. COMPANY**, Perry, Iowa: "Quicker Yet Washer." Represented by Chas. I. Todd and D. S. McMillan.
- GRAND RAPIDS STOVE COMPANY**, Grand Rapids, Mich.: Michigan Vapor Stoves and Ovens. Represented by Charles R. Graham.
- HOWARD STOVE & MFG. COMPANY**, Omaha, Neb.: Howard Overdraft Stoves.
- HAWKEYE INCUBATOR COMPANY**, Newton, Iowa: Lever Churn and One Minute Washer. Represented by A. Walter Jackson and F. Payne.
- IOWA RADIATOR COMPANY and CHANDLER PUMP COMPANY**, Cedar Rapids, Iowa: Represented by C. H. Chandler, F. M. Hale, H. P. Martin and W. E. Locke.
- JEWELL MFG. COMPANY**, Auburn, N. Y.: Jewell Temperature Controller. Represented by P. J. Murphy.
- JUMBO FURNACE COMPANY**, Des Moines, Iowa: Hot Air Furnaces. Represented by M. Breed.
- KEITH FURNACE COMPANY**, Des Moines, Iowa: Monitor Furnace. Bert R. Pranke, Geo. E. Wilsey and A. J. Allen.
- KLONDIKE INCUBATOR COMPANY**, Des Moines, Iowa: Represented by Harry H. Smith.
- KEYSTONE STEEL & WIRE COMPANY**, Peoria, Ill.: Wire Fencing. Represented by Geo. C. Young.
- GEO. M. KING LIGHTNING ROD COMPANY**, Des Moines, Iowa: Represented by C. H. Townsend.
- LENOX FURNACE COMPANY**, Marshalltown, Iowa: Hot Air Furnaces. Represented by F. J. Kiesel.
- LOWE BROTHERS COMPANY**, Dayton, Ohio: Paints and Varnishes. Represented by J. J. Mahoney.
- A. J. LINDEMANN & HOVERSON COMPANY**, Milwaukee, Wis.: Hot Plates and Cookers. Represented by B. G. Landau and T. M. Sayman.
- MINNESOTA STOVE COMPANY**, Shakopee, Minn.: Stoves, Ranges and Heaters. Represented by E. F. Smith.
- MARTIN COMPANY**, Sac City, Iowa: Lightning Rods. Represented by A. H. Refshauge and U. S. Stonebrook.
- MILWAUKEE CORRUGATING COMPANY**, Milwaukee, Wis.: Tite-Lock Metal Shingles, Sheet Metal Roofing and Siding. Represented by L. H. Fountain, C. E. Phillips and P. E. Sauerwein.
- MANUEL-SMITH HEATING COMPANY**, Minneapolis, Minn.: Sanitary School Heaters. Represented by W. F. Kunze and Olaf Oleson.
- MARLIN FIRE ARMS COMPANY**, New Haven, Conn.: Represented by Charles Porter.
- MARTIN-SENIOR COMPANY**, Chicago, Ill.: Monarch Paint. Represented by W. H. Nielsen.
- MAJESTIC MFG. COMPANY**, St. Louis, Mo.: The Great Majestic Range. Represented by A. J. Collins.
- NEY MFG. COMPANY**, Canton, Ohio: Haying Tools and Hardware Specialties. Represented by J. M. Mobley and Leon Stern.
- NORTHWESTERN KITCHENWARE MFG. COMPANY**, Minneapolis, Minn.: Economy Colander and Fruit Press. Represented by W. A. Stromme and E. E. Higgins.
- NATIONAL CABLE & MFG. COMPANY**, Niles, Mich.: Copper Cable Lighting Conductor. Represented by E. D. Walworth and J. J. Walworth.
- NOISELESS WASHING MACHINE COMPANY**, Boone, Iowa: Represented by J. H. Roberts and U. W. Walton.
- NORMAN MFG. COMPANY**, Des Moines, Iowa: The O. K. Acetylene Gas Generator. Represented by F. L. Oldfield.
- ONEIDA COMMUNITY, LTD.**, Oneida, N. Y.: Silverware. Represented by G. H. Miller.
- PLYMOUTH CORDAGE COMPANY**, North Plymouth, Mass.: Plymouth Rope. Represented by W. E. Collins.
- PITTSBURGH STEEL COMPANY**, Pittsburgh, Pa.: Wire Fencing. Represented by W. D. Ellsworth, O. J. Goodwin, C. A. Cochrane, R. D. Carver and E. D. Findley.
- PETERS CARTRIDGE COMPANY**, Cincinnati, Ohio: Cartridges. Represented by L. H. Fitzsimmons.
- PRAIRIE STATES MFG. COMPANY**, Cedar Rapids, Iowa: Lawn Fence, Steel Gates and Hardware Specialties. Represented by Chas. B. Baumgartner.
- PETERS & GRANT**, Kansas City, Mo.: Window Screen Hanger. Represented by D. T. Peters.
- PHILADELPHIA-MADE HARDWARE**: Henry Diston & Sons, Enterprise Mfg. Company, Miller Lock Company, North Brothers Mfg. Company and Fayette R. Plumb, Inc. Represented by C. H. Castlen.
- PECK-HAMRE MFG. COMPANY**, Berlin, Wis.: Jem and Jewel Line Mail Boxes, Latches, Trucks, &c. Represented by Fred R. Peck.
- PENINSULAR PAINT & VARNISH COMPANY, LTD.**, Detroit, Mich.: Peninsular Art Enamel. Represented by B. H. Coddington, C. G. McCullough and G. R. Bailey.
- JOHN PRITZLAFF HARDWARE COMPANY**, Milwaukee, Wis.: Reach Sporting Goods. Represented by J. H. Grunwald, F. A. Hughes, O. E. Wynne, N. B. Carpenter and W. J. Konvalinka.
- REMINGTON ARMS COMPANY and the UNION METALLIC CARTRIDGE COMPANY**, New York: Represented by M. F. Sharp and R. C. Walker.
- REYNOLDSON MFG. COMPANY**, Manson, Iowa: Twentieth Century Screen Wire Rack. Represented by J. E. Reynolds.
- SHARPLES SEPARATOR COMPANY**, West Chester, Pa.: Represented by J. F. Klenzie and F. M. Danner.
- SUMMITT STOVE COMPANY**, La Crosse, Wis.: Stoves and Steel and Cast Ranges. Represented by Glen W. Lay and J. G. Elston.
- W. H. STEPANEK**, Cedar Rapids, Iowa: Stepanek Cash and Sales Registers, Ledgers and Journals.
- R. F. SCHWAB & SONS COMPANY**, Milwaukee, Wis.: Warm Air, Steam and Hot Water Combination Furnace. Represented by J. M. Beach.
- STANDARD SEWING MACHINE COMPANY**, Cleveland, Ohio: Sewing Machines. Represented by E. C. Reed, F. W. Tobey and T. P. Tobey.
- STOVER MFG. COMPANY**, Freeport, Ill.: Ideal Feed Mills. Represented by Lee Madden.
- ST. PAUL ROOFING, CORNICE & ORNAMENT COMPANY**, St. Paul, Minn.: Represented by J. P. Williams and A. M. Smith.
- SIMONDS MFG. COMPANY**, Chicago: Saws and Files. Represented by C. F. Baffett and Will J. Feddery.
- THOMPSON BROTHERS COMPANY**, Grinnell, Iowa: Speed Washing Machine. Represented by W. F. Phillips.
- UNITED STATES REGISTER COMPANY, LTD.**, Battle Creek, Mich.: Represented by A. O. Jones.
- VICTOR MFG. COMPANY**, Leavenworth, Kan.: Wonder Washer. Represented by F. J. Tallant, J. H. Field and J. I. Goodman.
- VOSS BROS. MFG. COMPANY**, Davenport, Iowa: Voss line of Washers.
- WEBSTER MFG. COMPANY**, Boone, Iowa: Benson Seed Cleaner and Grain Separator. Represented by A. A. Webster.
- WILCOX MFG. COMPANY**, Aurora, Ill.: Tabular Steel Grindstones. Represented by M. H. Melrose.
- WARREN PAINT COMPANY**, Warren, Ohio: Mixed Paints. Represented by B. T. Moore.
- WHITE LILY MFG. COMPANY**, Davenport, Iowa: White Lily Washers. Represented by J. C. Foss and Theo. Rosche.
- WEISMAN KORD KUTTER COMPANY**, Marshalltown, Iowa: Cord Cutting Device. Represented by H. A. Weisman and C. H. Whitehead.
- THOMAS WHITE STOVE COMPANY**, Quincy, Ill.: Stoves and Ranges. Represented by Guy E. Green.
- WISCONSIN FOUNDRY & STEEL WORKS**, Cedar Grove, Wis.: Cedar Grove Steel Ranges. Represented by John Jungers and W. H. Jungers.
- WAHLE FOUNDRY & MACHINE WORKS**, Davenport, Iowa: The Snowball Washer. Represented by H. H. Wahle and Anton Nielsen.
- WATERLOO REGISTER COMPANY**, Waterloo, Iowa: Improved Side Wall Register. Represented by J. Pfeffer and J. Knox.
- YALE & TOWNE MFG. COMPANY**, New York: Art Hardware. Represented by A. B. Howell.

THE J. STEVENS ARMS & TOOL COMPANY, Chicopee Falls, Mass., has a new series of six single column mortised advertising electrotypes illustrating hunting scenes. These electrotypes the company will furnish to Hardware and Sporting Goods merchants gratis. The mortised space allows room for the merchant's announcement, firm name and address.

THE AMERICAN WATER SUPPLY COMPANY, 115 Broadway, New York, has been incorporated to manufacture and operate the Luellen Cup and Water Vendor. The officers of the company are: L. W. Luellen, president; M. P. Marks, vice-president and general manager, and S. Z. Marks, secretary and treasurer. The Vendor is an automatic machine which provides a drink of water in a new cup for a penny.



### National Sportsman's Show.

THE annual National Sportsman's Show will be held at the Madison Square Garden, New York, beginning Friday evening, February 26, and continuing until Saturday evening, March 6, inclusive. There will be many interesting features, including wild game, a hunting section, swimming pool, aquaria, water fowl, fly casting pool and camps on the main floor. Various sports, as has been the custom, will be conducted under the auspices of various representative athletic organizations. The show, as in the past, will be under the management of J. A. H. Dressel, 138 West Forty-second street, New York.

### Phosphate and Fertilizer Distributer.

The Peoria Drill & Seeder Company, Peoria, Ill., has recently placed on the market the phosphate and fertilizer distributer shown in the accompanying cuts. It can

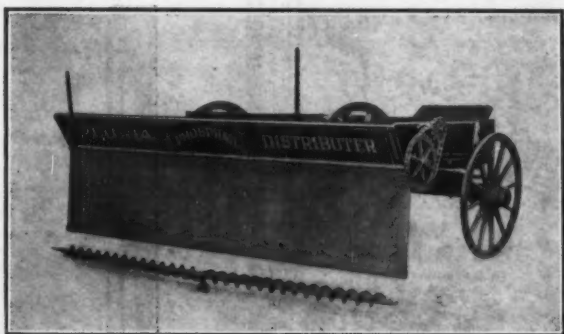


Fig. 1.—Phosphate and Fertilizer Distributer.

be attached to any ordinary farm wagon, as shown in Fig. 1, and sows rock phosphate, lime, salt, ashes and similar fertilizers. In Fig. 2 is shown the manner of attaching the drive chains. The distributer is fitted with a worm feed, and carries the phosphate back and forth over the feed from right to left by shifting the gear. The conducting apron for carrying the phosphate to within about 8 in. of the ground consists of two canvas sheets, which are supported by braces running from the rear of

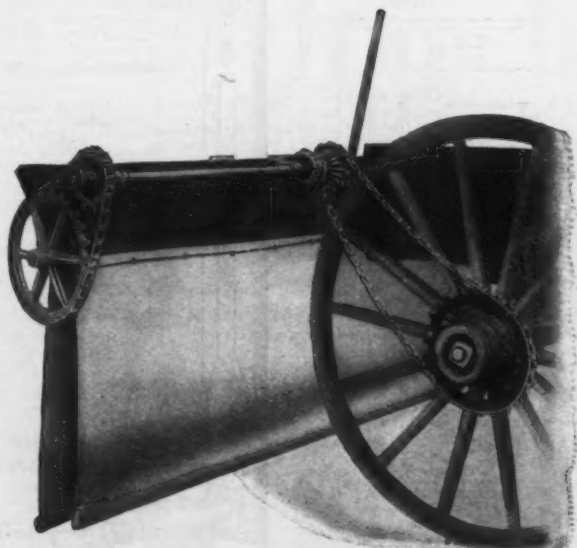


Fig. 2.—Geared End of Phosphate and Fertilizer Distributer.

the wagon axle. Break pins are provided in the supports so that when the sheet strikes obstacles the pins will break without tearing the canvas. A further object of the apron is to protect the phosphate from the winds and also to distribute it uniformly. The quantity to be sown is regulated by the lever at the left hand end of the distributer, which serves to open the feed plate, so that quantities from 100 to 4000 lb. can be distributed.

The entire feed plate can be removed for cleaning by loosening one bolt. The shipping weight of the 11-ft. distributer is 280 lb. The point is made that as the gearing is on the outside of the machine it does not come in contact with the phosphate and clog.

### The Barr Lawn Trimmer.

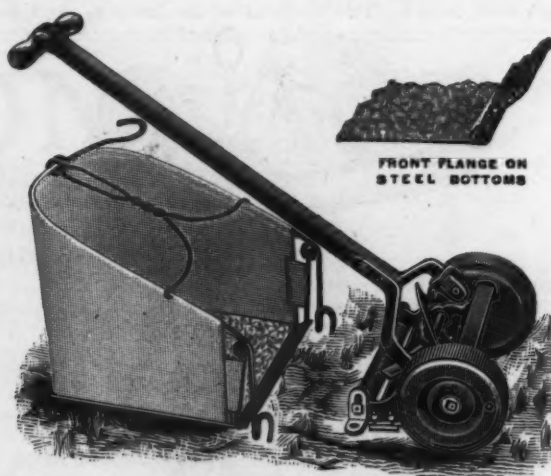


Barr Lawn Trimmer.

The lawn trimmer here-with illustrated has shears with 6-in. blades, made from No. 15 gauge, highly tempered steel, the quality of which is guaranteed by the manufacturer. The shears are attached to handles of seasoned oak or maple wood and are 32 in. long. The trimmer is designed for use instead of a sickle and ordinary grass shears for trimming in difficult places around trees, flower beds, bushes, hedges, &c. In use the operator stands erect, walking behind the trimmer, and using it exactly as a lawn mower, the trimmer resting lightly on the ground so that there is no weight for the operator to lift. The device is manufactured and put on the market by the Barr Lawn Trimmer Company, 120 Chestnut street, Lancaster, Pa.

### The Easy Emptying Grass Catcher.

The Specialty Mfg. Company, St. Anthony Park, Minn., is offering improved grass catchers with iron handle, front flange, eye bracket and hook. The hook is permanently attached to the catcher and hooks over the handle of the mower. The catcher is attached and detached instantly with one hand. The hook drops down parallel with the handle. The catcher illustrated has a square bottom and is designed for cheaper trade than one with a round, deep bottom with the same improvements. The catchers have galvanized steel bottoms and heavy duck sides. The eye brackets for attaching the catcher to the mower allow

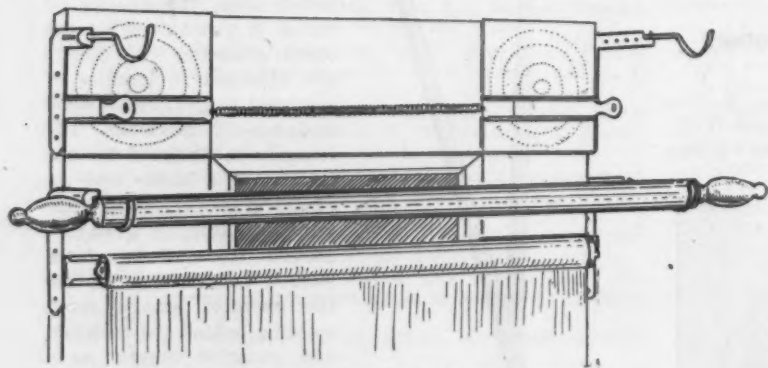


The Easy Emptying Grass Catcher.

perfect adjustment and prevent the catcher jumping off. The catchers are adjustable to any make of mower. The catcher shown represents sizes No. 5 G and No. 6 G, the latter being 4 in. wider than the former and designed for 18 to 22 in. mowers. The No. 5 G is for 12 to 18 in. mowers.

### The One Minute Automatic Shade and Curtain Bracket.

The W. G. Mitchell Spring Works, Johnstown, Pa., are offering the curtain and shade bracket shown herewith. It is quickly and easily put up and taken down, requiring no screws or nails, and does not destroy the woodwork. To install, the spring is stretched across the window frame and the points of the fixtures are pushed into the wood on the sides of the window frame. The slides for shade are adjustable for different width shades without cutting the shade or roller, as the adjustment is 9 in. The springs furnished are for window frames up



The One Minute Automatic Shade and Curtain Bracket. to 46 in. wide. For wider frames longer springs are required, which can be furnished.

### Linolite Desk Lamps.

The H. W. Johns-Manville Company, 100 William street, New York, has adapted its Linolite electric incandescent tubular lamp to desk lamps, two styles of which are shown herewith. While the design of the



Fig. 1.—Linolite Desk Lamp.

lamps is somewhat different from others now on the market, the novel feature is in the tubular lamp, which is 12 in. long between centers, so as to distribute the light more evenly and over a larger area of the desk than bulb lamps. The filament of the lamp is stretched



Fig. 2.—Linolite Adjustable Desk Lamp.

out straight from end to end, and lies throughout within the focus of the reflector. It is explained that the filament of a lamp throws its greatest light at right angles to its axes, therefore, the lamp illustrated gives more useful light than bulb lamps. The lamps are made in burnished brass, oxidized copper and gun metal finish.

### Climax Automatic Ventilating Sash Lock.

The Climax Lock Ventilator Company, Ellicott Square, Buffalo, N. Y., is manufacturing the ventilating sash lock herewith illustrated. Fig. 1 shows front view, also reverse of the lock, and Fig. 2 its location upon a sash. The lock permits ventilation by securely locking the sash partially open, either at top or bottom or both. It is impossible to open the window from the outside by putting an arm through the openings, or by the use of a knife blade, clock spring or tool, because it is necessary to close the window entirely before it can be opened wide. This can be done, when desired, by letting the bolt head travel

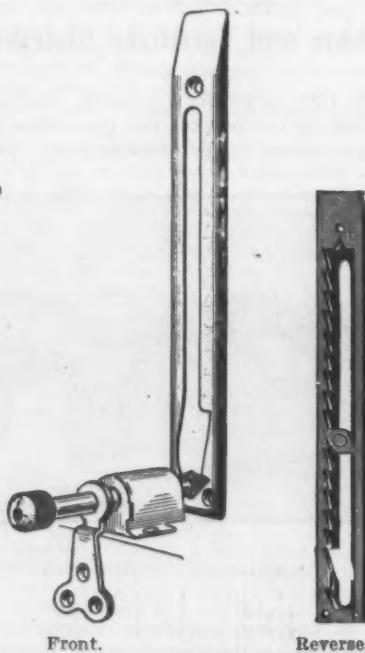


Fig. 1.—Climax Automatic Ventilating Sash Lock.

over the enlarged opening in the slide. The lock allows a window to be opened 6½ in. from top or bottom, without sacrificing security. By turning the knob to the right as far as it will go the lock will draw the sashes tightly together. It is stated that the lock cannot be

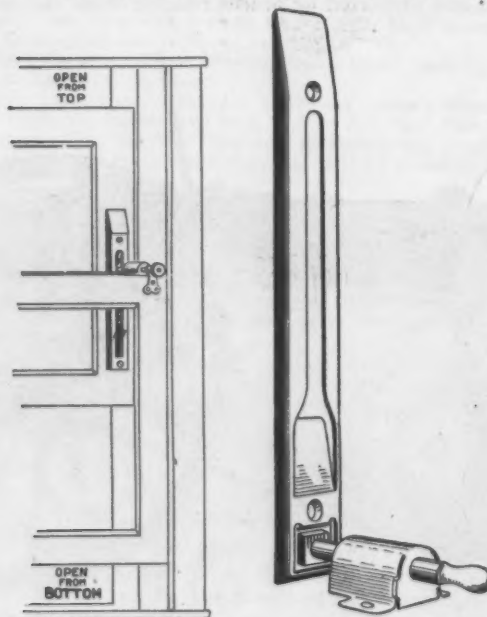


Fig. 2.—Ventilating with Sash. Open at Bottom and Top.



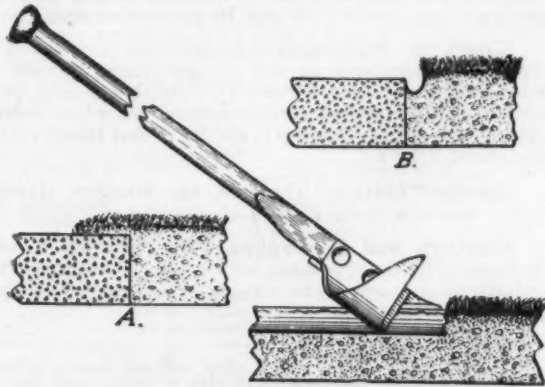
Fig. 3.—The Simplex Lock.

pried off with a burglar's jimmy, also that it will withstand a pressure of over 1000 lb. It is explained that the lock is so simple in operation that a child or stupid servant can use it, as a turn of the knob opens it and the closing of the window locks it. The lock can be attached to old or new sash without cutting or marring the sash, only a screwdriver being needed.



### The Louden Lawn Trimmer.

The implement here shown is designed for the trimming of edges of lawns adjoining cement walks. It is



The Louden Lawn Trimmer.

one of the latest additions to the line of implements made by the Louden Machinery Company, Fairfield, Iowa.

The manner of its operation is shown herewith, A representing the overlapping turf on the walk, and B the groove cut in trimming. Running in front of the trimmer is a bevel point which loosens overlapping sod or matted grass, thus facilitating its removal following the passage of the cutter. The latter is fitted with a handle 1½ in. in diameter by 4½ ft. long. The cutter is made of mower knife steel, which carries a keen cutting edge, that may be sharpened with a file or emery stone without removing. The weight of the trimmer is 2 lb.

### Chi-Namel Mission Finishes.

The Ohio Varnish Company, Cleveland, Ohio, has added to its Chi-Namel list a full line of mission finishes in all popular colors, to be used in connection with its patented graining process. The graining process makes it possible to obtain a mission finish on pieces of furniture without removing the old finish. The company remarks that mission rooms are now within reach of the humblest household, and furniture may also be finished to match the woodwork, as if built to order.

## PAINTS, OILS AND COLORS

### Animal, Fish and Vegetable Oils—

	gal.	bb.
Linseed, Western, Raw.....	55 @56	
State, Raw.....	55 @56	
City, Raw.....	56 @57	
Boiled, 1¢ gal. advance on Raw.....	75 @	
Raw, Calcutta, in bbls.....	56 @	
Lard, Prime, Winter.....	75 @80	
Extra No. 1.....	56 @	
No. 1.....	48 @	
Cotton-seed, Crude, f.o.b. mill.....	53 3/4 @34 1/2	
Summer, Yellow, prime.....	55 5/8 @56 3/8	
Summer, White.....	55 5/8 @56 3/8	
Yellow, Winter.....	62 20 @63 30	
Tallow, Acidless.....	56 @	
Menhaden, Brown, Strained.....	33 @	
Northern Crude.....	32 @	
Southern.....	32 @	
Light Strained.....	33 @	
Bleached Winter.....	36 @	
Cocunut, Ceylon.....	70 6 1/2 @71	
Cochin.....	70 6 1/2 @71	
Cod, Domestic, Prime.....	34 @	
Newfoundland.....	38 @	
Red Elaine.....	45 @	
Saponified.....	70 6 1/2 @71	
Olive, Yellow.....	51 50 @	
Neatsfoot, Prime.....	57 @	
Palm, Lagos.....	70 6 1/2 @71	

### Mineral Oils—

	gal.	bb.
Black, 29 gravity, 25¢@30 cold test.....	13 @13 1/2	
29 gravity, 15 cold test.....	13 1/4 @14	
Summer.....	12 1/2 @13	
Cylinder, light filtered.....	20 1/4 @21	
Dark, filtered.....	18 @19	
Paraffine, 903-907 sp. gravity.....	11 1/4 @15	
903 sp. gravity.....	13 1/2 @14	
883 sp. gravity.....	11 @11 1/2	
Red.....	13 1/2 @14	

### Miscellaneous—

	ton	gal.
White, Foreign.....	12 50 @20 50	
Amer. floated.....	17 00 @18 00	
Off color.....	12 50 @15 00	
Chalk, in bulk.....	3 00 @ 3 40	

	ton	gal.
China Clay, Imported.....	11 50 @18 00	
Cobalt, Oxide.....	100 lb 1 45 @ 2 60	
Whiting, Commercial.....	100 lb 45 @50	
Gilders.....	100 lb 52 @ 64	
Ex. Gilders.....	100 lb 56 @ 68	

### Putty, Commercial—

	100 lb	ton
In bladders.....	\$1 70 @2 00	
In bbls. or tubs, 100 lb.....	1 20 @1 45	
In 1 lb to 5 lb tins.....	2 65 @3 25	
In 12 1/2 to 50 lb tins.....	1 50 @1 90	

### Spirits Turpentine—

	gal.	bb.
In bbls.....	43 1/2 @44	
In Machine bbls.....	44 @44 1/2	

### Glue—

	100 lb	ton
Cabinet.....	12 @15	
Common Bone.....	7 1/2 @ 9	
Extra White.....	18 @24	
Fish, liquid, 50 gal. bbls. per gal.....	60 @1 20	
Foot Stock, White.....	12 @14	
Foot Stock, Brown.....	9 @11	
German Common Hide.....	10 @12	
German Hide.....	12 @18	
French.....	10 @10	
Fish.....	13 @16	
Low Grade.....	10 @12	
Medium White.....	14 @19	

### Gum Shellac—

	100 lb	ton
Bleached, Commercial.....	17 1/2 @18	
Bone Dry.....	22 1/2 @23	
Button.....	20 @30	
Diamond.....	24 @35	
Fine Orange.....	25 @28	
A. C. Garnet.....	18 @19	
G. A. L. Garnet.....	16 @17	
Kala Button.....	12 @13	
D. C.....	35 @36	
Octagon B.....	28 @29	
T. N.....	19 @19	
V. S. O.....	31 @32	

### Colors in Oil—

	100 lb	ton
Black, Lampblack.....	12 @14	
Blue, Chinese.....	36 @46	
Blue, Prussian.....	32 @36	

	100 lb	ton
Blue, Ultramarine.....	13 @16	
Brown, Vandyke.....	11 @14	
Green, Chrome.....	12 @16	
Green, Paris.....	24 @24	
Sienna, Raw.....	12 @15	
Sienna, Burnt.....	12 @15	
Umber, Raw.....	11 @14	
Umber, Burnt.....	11 @14	

### White and Red, Lead &c.—

	100 lb	ton
Lead, English white, in Oil.....	10 1/2 @10 1/2	
Lead, American White.....	10 1/2 @10 1/2	
Dry and in Oil, 100, 250 and 500 lb kegs.....	6 1/2 @ 6 1/2	
Dry and in Oil, 25 and 50 lb kegs.....	7 @ 7	
Dry and in Oil, 12 1/2 lb kegs.....	7 1/4 @ 7 1/4	
In Oil, 25 lb tin pails.....	7 1/4 @ 7 1/4	
In Oil, 12 1/2 lb tin pails.....	7 1/4 @ 7 1/4	
In Oil, 1, 2, 3 and 5 lb tin cans, ass't.....	8 1/2 @ 8 1/2	

### Red Lead and Litharge—

	100 lb	ton
In 100 lb kegs.....	7 @ 7	
In 25 and 50 lb kegs.....	7 1/4 @ 7 1/4	
In 12 1/2 lb kegs.....	7 1/4 @ 7 1/4	
In lots of less than 500 lbs. 1/4¢ @ 1/4¢ advance over above prices of White and Red Lead and Litharge.....	7 1/4 @ 7 1/4	
Lead, American. Terms: On lots of 500 lbs and over, 60 days, or 2% for cash if paid in 15 days from date of invoice.....	7 1/4 @ 7 1/4	

### Zinc, Dry—

	100 lb	ton
American, dry.....	5 1/4 @ 5 1/4	
Red Seal (French process).....	6 1/2 @ 7	
Green Seal.....	7 1/4 @ 7 1/4	
German Red Seal (French process).....	7 @ 7 1/4	
Green Seal.....	7 1/4 @ 7 1/4	
White Seal.....	8 1/4 @ 9	
French, Red Seal.....	8 1/4 @ 8 1/4	
Green Seal.....	10 1/2 @ 10 1/2	

### Dry Colors—

	100 lb	ton
Black, Carbon.....	6 1/2 @ 10	
Black Drop, American.....	3 1/2 @ 8	

	100 lb	ton
Black Drop, English.....	5 @15	
Black, Ivory.....	16 @20	
Lamp, commercial.....	4 @ 4	
Blue, Celestial.....	4 @ 6	
Blue, Chinese.....	30 @31	
Blue, Prussian, Domestic.....	23 @30	
Blue, Ultramarine.....	23 @30	
Brown, Spanish.....	1 1/2 @ 1	
Carmine, No. 40.....	33 10 @3 25	
Green, Chrome, ordinary.....	3 1/2 @ 5	
Green, Chrome, pure.....	17 @ 25	

### Ocher, American—

	100 lb	ton
American Golden.....	4 @ 5	
French.....	14 @15	
Foreign Golden.....	3 @ 4	

### Orange Mineral, English.....

	100 lb	ton
French.....	12 1/2 @13	
German.....	12 @13	
American.....	9 @10	

### Red, Indian, English.....

	100 lb	ton
American.....	3 @ 3 1/4	
Red, Turkey, English.....	4 @10	
Red, Tuscan, English.....	7 @10	
Red, Venetian, Amer.....	100 lb \$0.75 @1.50	
English.....	100 lb \$1.15 @1.50	

### Sienna, Italian, Burnt and Powdered.....

	100 lb	ton
Italian, Raw, Powdered.....	3 @ 7	
American, Raw.....	2 1/4 @ 3	
American Burnt and Powdered.....	2 1/4 @ 3	

### Talc, French.....

	100 lb	ton
American.....	15 00 @25 00	
Terra Alba, French.....	100 lb .50 @1.00	
English.....	100 lb .50 @1.00	
American.....	100 lb No. 1 .75 @ .80	
American.....	100 lb No. 2 .60 @ .65	

### Umber, Turkey, Bnt. & Pow'd.....

	100 lb	ton
Turkey, Raw and Powdered.....	2 1/2 @ 3	
Burnt, American.....	2 @ 2 1/4	
Raw, American.....	2 @ 2 1/4	

### Yellow, Chrome, Pure.....

	100 lb	ton
Oxide Red, American.....	2 @ 7 1/4	
Vermilion, English, Imported.....	6 70 @ 70	
Chinese.....	\$0.90 @1.00	

# THE IRON AGE

The oldest paper in the world devoted to the interests of the Hardware, Iron, Machinery and Metal Trades, and a standard authority on all matters relating to those branches of industry.

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# Current Hardware Prices.

**General Goods.**—In the following quotations General Goods—that is, those which are made by more than one manufacturer—are printed in *Italics*, and the prices named, unless otherwise stated, represent those current in the market as obtainable by the fair retail Hardware trade, whether from manufacturers or jobbers. Very small orders and broken packages often command higher prices, while lower prices are usually given to larger buyers.

**Special Goods.**—Quotations printed in small type (Roman) relate to goods of particular manufacturers, who request the publication of the prices named and are responsible for their correctness. They usually represent the prices to the small trade, lower prices being generally obtainable by the fair retail trade, from manufacturers or jobbers.

**Range of Prices.**—A range of prices is indicated by means of the symbol @. Thus 33% @ 33% & 10% signifies

that the price of the goods in question ranges from 33% per cent. discount to 33% and 10 per cent. discount.

**Names of Manufacturers.**—For the names and addresses of manufacturers see the advertising columns and also THE IRON AGE DIRECTORY, issued annually, which gives a classified list of the products of our advertisers and thus serves as a DIRECTORY of the Iron, Hardware and Machinery trades.

**Standard Lists.**—"The Iron Age Standard Hardware Lists" contains the list prices of many leading goods.

**Additions and Corrections.**—The trade are requested to suggest any improvements with a view to rendering these quotations as correct and as useful as possible to Retail Hardware Merchants.

## Adjusters, Blind—

Columbian and Domestic.....33%  
North's.....10%  
Upon's Patent, 3/4 gro., \$29.90.....10%  
Zimmerman's—See Fasteners, Blind.

## Window Stop—

Ives' Patent.....10%  
Ives' Stop Bead Screws and Washers.....10%  
Taplin's Perfection.....10%

## Ammunition—See Caps, Cartridges, Shells, &c.

## Anti-Rattlers—

Fernald Mfg. Co., Burton Anti-Rattlers, 1/2 doz. pairs, Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

## Anvils—American—

Eagle Anvils.....10%  
Hay-Budden, Wrought.....10%  
Trenton.....10%

## Imported—

Swedish Solid Steel Paragon, 1/2 doz.....10%  
Solid Steel Sisco, Superior, 1/2 doz.....10%  
Wright & Sons, 3/4 doz, \$4 to \$19.....10%  
D. 114; 3/4 doz to 600 lb, 114%.

## Anvil, Vice and Drill—

Millers Falls Co., \$18.00.....15%  
Apple Parers—See Parers, Apple, &c.

## Aprons, Blacksmiths'—

Livingston Nail Co.....10%

## Augers and Bits—

Com. Double Spur.....30%  
Jennings' Patn., Bright, 1/2 doz, \$10.70.....70%  
Black Lip or Blued.....65%  
Boring Mach. Augers.....70%  
Car Bits, 12-in. twist.....40%  
Ford's Auger and Car Bits.....40%  
Ft. Washington Auger Co., Com. ard's.....35%  
Forster Pat. Auger Bits.....35%  
C. E. Jennings & Co.:  
No. 10 ext. lip, R. Jennings' list.....25%  
No. 30, R. Jennings' list.....25%  
Russell Jennings' list.....25%  
L'Hommedieu Car Bits.....15%  
Mayhew's Countersink Bits.....15%  
Pugh's Black.....20%  
Pugh's Jennings' Pattern.....20%  
Snell's Auger Bits.....20%  
Snell's Bell Hangers' Bits.....20%  
Snell's Car Bits, 12-in. twist.....20%  
Snell's King Auger Bits.....20%  
Swan's.....20%  
Swan's, Jennings' Pattern.....20%  
Wright's Jennings' Bits.....20%

## Bit Stock Drills—

See Drills, Twist.

## Expansive Bits—

Clark's Pattern, No. 1, 1/2 doz, \$38.....10%  
No. 2, 1/2 doz, \$38.....10%  
Ford's, Clark's Pattern.....60%  
C. E. Jennings & Co., Steer's Pat. 25%  
Lavigne Pat. small size, \$18.00; large size, \$26.00.....60%  
Swan's.....60%

## Gimlet Bits—

Common Dbl. Out.....\$3.00 @ 3.25  
German Pattern, Nos. 1 to 10, \$4.75; 11 to 13, \$3.75

## Hollow Augers—

Bonney Pat., per doz.....\$5.50 @ 6.00  
Ames.....20%  
Universal.....20%

## Ship Augers and Bits—

Ship Augers.....40%  
Ford's.....40%  
C. E. Jennings & Co.:  
L'Hommedieu's.....6%  
Watrous.....35%  
Snell's.....40%

## Awl Hatts—See Handles, Mechanics' Tool.

## Awls—

Brad Awls:  
Handled.....gro. \$2.75 @ 3.00  
Unhanded, Shlided.....gro. \$2.75 @ 3.00  
Unhanded, Patent.....gro. \$2.75 @ 3.00

## Peg Awls—

Unhanded, Patent.....gro. \$1.75 @ 2.00  
Unhanded, Shlided.....gro. \$1.75 @ 2.00  
Scratch Awls:  
Handled, Com.....gro. \$1.50 @ 1.75  
Handled, Socket.....gro. \$1.50 @ 1.75  
Emore Tool Mfg. Co.:  
Timers and Brad Awls.....\$5.75  
Scratch Awls.....60%

## Awl and Tool Sets—See Sets, Awl and Tool.

## Axes—

Single Bit, base weights: Per doz.  
First Quality.....\$4.75 @ 5.00  
Second Quality.....\$4.25 @ 4.50

Double Bit, base weights:  
First Quality.....\$7.00 @ 7.50  
Second Quality.....\$6.50 @ 6.75

## Axle Grease—

See Grease, Axle.

## Axles—

Concord, Loose Collar.....\$4.45 @ 4.75  
Concord, Solid Collar.....\$4.45 @ 4.75

No. 1 Common, Loose.....\$4.45 @ 4.75  
No. 1 1/2 Com. New Style.....\$4.45 @ 4.75  
No. 2 Solid Collar.....\$4.45 @ 4.75

Half Patent:  
Nos. 7, 8, 11 and 12.....70%  
Nos. 13 to 14.....70%  
Nos. 15 to 18.....70%  
Nos. 19 to 22.....70%

## Boxes, Axles—

Common and Concord, not turned.....1b, 50¢ @ 6¢

Common and Concord, turned, 1b, 60¢ @ 7¢

Half Patent.....1b, 9¢ @ 10¢

## Bait—

Hendryx:  
A Bait.....20%  
B Bait.....25%  
Competitor Bait.....20%

## Balances—

Caldwell new list.....50%  
Pulman.....50%

## Spring—

Light Spring Balances.....60%  
Chatillon's:  
Light Spg. Balances.....50%  
Straight Balances.....40%  
Circular Balances.....50%  
Large Dial.....50%

## Barb Wire—See Wire, Barb.

## Bars—

Steel Crowbars, 10 to 40 lb, per lb, 2¢ @ 2 1/4¢

## Towel—

No. 10 Ideal, Nickel Plate, 3/4 gro, \$2.50

## Beam, Scale—

Scale Beams.....40%  
Chatillon's No. 1.....30%  
Chatillon's No. 2.....40%

## Beaters, Carpet—

Holt-Lyon Co.:  
No. 12 Wire Coppered 3/4 doz, \$9.00; Tinned.....\$9.85  
No. 11 Wire Coppered 3/4 doz, \$1.15; Tinned.....\$1.29  
No. 10 Wire Tinned.....\$1.50

## Beaters Egg—

Dover Stamping & Mfg. Co., No. 1, Genuine Dover, per gro, No. 1, Tumbler Size, \$2.50; No. 2, Family Size, \$7.50; No. 3, Extra Family Size, \$24.00; No. 4, Hotel Size, \$30.00.

Holt-Lyon Co.:  
Holt, per doz, No. 5, Jap'd, \$9.00; No. A, Jap'd, \$1.15; No. B, Jap'd, \$1.25; No. C, Jap'd, \$1.45.

Lyon, Jap'd, per doz, No. 2, \$1.35.

Taplin Mfg. Co.:  
Improved Dover, per gro, No. 60, \$4.00; No. 75, \$4.50; No. 100, \$7.00; No. 120, \$8.50; No. 150, \$10.00; No. 180, \$11.50; No. 200, \$13.00; No. 220, \$14.50; No. 240, \$16.00; No. 260, \$17.50; No. 280, \$19.00; No. 300, \$20.50; No. 320, \$22.00; No. 340, \$23.50; No. 360, \$25.00.

## Bellows—

Blacksmith, Standard List:  
Split Leather.....60%  
Grain Leather.....60%

## Hand—

Inch.....6 7 8 9 10  
Doe.....\$5.00 5.50 6.00 6.50 7.50

## Molders—

Inch.....10 12 14 16  
Doe.....\$7.50 9.00 12.00 15.00

## Bells—

Wrought Cow Bells.....75%  
Jersey.....75%  
Texas Star.....50%

## Door—

Home, R. & E. Mfg. Co.'s.....\$5.40

## Hand—

Polished, Brass.....60%  
White Metal.....60%

Nickel Plated.....50%  
Swiss.....50%

Cone's Globe Hand Bells.....33%  
Miscellaneous—

Farm Bells.....1b, 2¢ @ 2 1/4¢  
Church and School.....60%

## Belting—

First Quality, Ex. Hy., Strictly Short Lap.....60%  
Standard.....70%

Light Double.....75%  
Cut Leather Lacing.....45%  
Leather Lacing Sides, per sq. ft. 1.25¢

## Rubber—

Competition (Low Grade).....70%  
Standard.....60%  
Best Grades.....40%

## Bench Stops—

See Stops, Bench

## Benders and Upsetters, Tire—

Green River Tire Benders and Upsetters.....20%

## Bicycle Goods—

John S. Long's Son & Co.'s 1908 list:  
Chain, Parts, Spokes.....50%  
Tubes.....60%

## Bits—

Auger, Gimlet, Bit Stock Drills, &c.—See Augers and Bits.

## Blocks Tackle—

Common Wooden.....75%  
B. & L. R. Co.:  
Boston Wood Snatch, 50%; Eclipse Steel, 75%; Hollow Steel, 50%  
Wire Rope, 50%; Tarbox New Style Steel, 50%; Wire Rope Snatch, 50%.

Lane's Patent Automatic Lock and Junior.....30%  
See also Machines, Hoisting.

## Boards, Stove—

Paper and Wood Lined.....55%  
Embossed.....55%

## Boards, Wash—

See Washboards.

## Bobs, Plumb—

Keuff



**Cages, Bird—**

Hendryx Brass: Series 3000, 5000,  
1100, net list; 1200, 15%; 200, 300,  
900 ..... 30%  
Hendryx Bronze: Series 700, 800 ..... 30%  
Hendryx Enamelled ..... 35%

**Calipers—See Compasses.**

**Calks, Toe and Heel—**

Blunt, 1 prong, per 100 lb., .....  
\$3.50 @ \$3.85  
Sharp, 1 prong, per 100 lb., .....  
\$3.00 @ \$3.35  
Burke's, 1 pr. Blunt Toe, 3/4 in.; 2 pr.  
Blunt Toe, 3/4 in.; 1 pr. Sharp Toe,  
3/4 in.; 2 pr. Sharp Toe, 3/4 in.; Blunt  
Heel, 3/4 in.; Sharp Heel, 3/4 in.;  
Lautier, Blunt, 3/4 in.; Sharp, 3/4 in.;  
Perkins', Blunt, 3/4 in.; Sharp, 3/4 in.;  
4.15¢

**Can Openers—**

See Openers, Can.

**Caps, Percussion—**

Eley's E. B. .... 52¢ @ 55¢  
G. D. .... per M 10¢ @ 15¢  
F. L. .... per M 10¢ @ 15¢  
G. E. .... per M 10¢ @ 15¢  
Musket .... per M 10¢ @ 15¢

**Primers—**

Berdan Primers, \$2 per M. 30¢ @ 35¢  
Primer Shells and Bullets, 15¢ @ 10¢  
All other primers per M \$1.52 @ 1.60

**Carpet Stretchers—**

See Stretchers, Carpet.

**Cartridges—**

Blank Cartridges:  
32 C. F., \$5.50 ..... 10¢ @ 5¢  
38 C. F., \$7.00 ..... 10¢ @ 5¢  
22 cal. Rim, \$1.50 ..... 10¢ @ 5¢  
32 cal. Rim, \$2.75 ..... 10¢ @ 5¢  
B. B. Caps, Con. Bull, Sneyd, \$1.00  
B. B. Caps, Round Bull, \$1.10  
Central Fire ..... 25¢  
Target and Sporting Rifle, 15¢ @ 10¢  
Primed Shells and Bullets, 15¢ @ 10¢  
Rim Fire, Sporting, ..... 50¢  
Rim Fire, Military, ..... 15¢ @ 5¢

**Casters—**

Bed ..... 65¢ @ 70¢  
Plate ..... 60¢ @ 65¢  
Philadelphia ..... 70¢ @ 75¢  
Acme, Ball Bearing, ..... 35¢  
Gem (Roller Bearing), 10¢ @ 10¢  
Steel Gem (Roller Bearing), ..... 70¢  
Standard Ball Bearing, ..... 40¢  
Yale (Double Wheel) low list, 40¢ @ 10¢

**Cattle Leaders—**

See Leaders, Cattle.

**Chain, Proof Coil—**

American Coil, Straight Link:  
3-16 5-16 5-16 3-16 3-16  
\$7.70 5.10 4.15 3.50 3.30 3.10  
% 1 1 1/2 to 1 1/4 inch.  
\$3.00 3.10

In cash lots, deduct 25¢.

German Coil, ..... 70¢ @ 5¢  
German Pattern Coil:  
6-0 to 1, ..... 70¢ @ 10¢  
2 and 3, ..... 60¢ @ 10¢  
1/2, 5 and 6, ..... 50¢ @ 10¢

**Halter—**

Halter Chains, ..... 60¢ @ 60¢  
German Pattern, Halter Chains,  
list July 24, '97, ..... 70¢ @ 5¢  
Covert Mfg. Co., ..... 35¢ @ 5¢

**Cow Ties—**

See Halters and Ties.

**Trace, Wagon, &c.—**

Traces, Western Standard: 100 pr.  
6-4-6-3, Straight, with ring, \$26.00  
6-4-6-2, Straight, with ring, \$27.00  
6-4-6-2, Straight, with ring, \$30.00  
6-4-6-2, Straight, with ring, \$35.00

NOTE—Add 2¢ per pair for Hooks

Twist Traces: add per pair for Nos. 2  
and 3, 2¢; No. 1, 3¢; No. 0, 4¢ to price of  
Straight Link.

Eastern Standard Traces, Wag-  
on Chain, &c., ..... 70¢

**Miscellaneous—**

Jack Chain, list July 10, '93:  
Iron ..... 60¢ @ 10¢  
Brass ..... 65¢  
Safety and Plumbers' Chains, 75¢  
Gal. Pump Chain, ..... 45¢ @ 5¢  
Bridgeport Chain Co.:  
Triumph Halter and Coll, 5¢ @ 40¢  
Triumph Dog, ..... 50¢ @ 10¢  
Brown Halter and Coll, 45¢ @ 5¢  
Covert Mfg. Co.:  
Breast, Halter, Heel, Helm, Stal-  
lion ..... 40¢  
Oneida Community:  
American Halter, Dog and Kennel  
Chains, 35¢ @ 40¢  
Niagara Dog Leads and Kennel  
Chains, 45¢ @ 50¢  
Wire Goods Co.:  
Dog Chain, ..... 70¢  
Universal Dbl.-Jointed Chain, ..... 70¢

**Chain and Ribbon, Sash—**

Oneida Community:  
Steel Chain, ..... 60¢  
Pullman:  
Bronze Chain, 60%; Steel Chain,  
Coppered ..... 60¢ @ 10¢  
Sash Chain Attachments, per set, 5¢  
Aluminum Sash Ribbon, per 100  
ft. ..... \$2.00 @ 35.00  
Sash Ribbon Attachments, per set, 5¢

**Chalk—**

Carpenters' Blue, ..... 30¢  
Carpenters' Red, ..... 50¢  
Carpenters' White, ..... 40¢

**Checks, Door—**

Bardley's, ..... 65¢  
Pullman, per gro., ..... 50¢  
Russwin, ..... 35¢ @ 5¢

**Chests, Tool—**

American Tool Chest Co.:  
Boys' Chests, with Tools, ..... 55¢  
Youths' Chests, with Tools, ..... 40¢  
Gentlemen's Chests, with Tools, ..... 30¢  
Farmers', Carpenters', etc., Chests,  
with Tools ..... 20¢  
Machinists' and Pipe Fitters'  
Chests, Empty, ..... 15¢  
Tool Cabinets, ..... 15¢  
C. E. Jennings & Co.'s Machinists'  
Tool Chests, ..... 75¢

**Chisels—**

Socket Framing and Firmer  
Standard List, 80¢ @ 10¢ @ 80¢ @ 10¢  
Buck Bros., ..... 30¢  
C. E. Jennings & Co.:  
Socket Firmer No. 10, ..... 25¢ @ 75¢  
Socket Framing No. 15, ..... 25¢ @ 75¢  
Swan's, ..... 65¢ @ 70¢  
L. & J. White & Co., 30¢ @ 30¢ @ 5¢

**Tanged—**

Tanged Firmers, ..... 30¢ @ 55¢

Buck Bros., ..... 30¢

C. E. Jennings & Co. Nos. 191, 181, 25¢

L. & J. White Co., ..... 25¢ @ 35¢

**Cold—**

Cold Chisels, good quality, 15¢ @ 15¢

Cold Chisels, fair quality, 11¢ @ 12¢

Cold Chisels, ordinary, 9¢ @ 10¢

Elmore Tool Mfg. Co.:  
Cold Chisels, ..... 50¢ @ 5¢

**Chucks—**

Almond Drill Chucks, ..... 35¢  
Almond Turret Six-Tool Chuck, ..... 35¢ @ 5¢  
Beach Pat, each \$9.00, ..... 35¢ @ 5¢  
Empire ..... 25¢  
Blacksmith's ..... 25¢  
Jacobs' Drill Chucks, ..... 25¢  
Pratt's Positive Drive, ..... 25¢  
Skinner Lathe Chucks:  
Independent ..... 35¢  
Universal, Reversible Jaws, ..... 35¢  
Universal, Com. Style Jaws, ..... 35¢  
Combination, Reversible Jaws, ..... 35¢  
Combination, Com. Style Jaws, ..... 40¢  
Round Body or Box Body, 2 Chuck  
Jaws ..... 25¢  
Geared Scroll Chucks, ..... 25¢  
Drill Chucks:  
New Model, 25%; Geared Pat-  
tern, 25%; Skinner Patent, ..... 25¢  
Positive Drive, ..... 40¢  
Planer Chucks, ..... 20¢  
Standard ..... 45¢  
Drill Press Vises, ..... 30¢  
Face Plate Jaws, ..... 35¢  
Standard Tool Co.:  
Improved Drill Chuck, ..... 45¢  
Unijon Mfg. Co.:  
Combination, Nos. 1, 2, 3, 4, 5, 6,  
7, 8 and 17, 40%; No. 21, ..... 35¢  
Scroll Combinations, Nos. 83 and  
84 ..... 35¢  
Clear Scroll, Nos. 33, 34 and 35, ..... 35¢  
Independent Iron, Nos. 15 and 318, 35¢  
Independent Steel, No. 64, ..... 25¢  
Union Drill, Nos. 000, 00, 100, 101,  
102, 103, 104 ..... 35¢  
Union Clear Drill, ..... 25¢  
Universal, 11, 12, 16, 17, 13, 14, 15, 40¢  
Universal No. 42, ..... 35¢  
Iron Face Plate Jaw, Nos. 28, 30,  
48 and 50, ..... 35¢  
Steel Face Plate Jaws, Nos. 70 and  
72 ..... 30¢  
Westcott Patent Chucks:  
Lathe Chucks, ..... 50¢  
Little Giant Auxiliary Drill, ..... 50¢  
Little Giant Double Grip Drill, ..... 50¢  
Little Giant Drill, Improved, ..... 50¢  
Oneida Drill, ..... 50¢  
Scroll Combination Lathe, ..... 50¢  
Whittaker Mfg. Co.:  
National Drill, ..... 25¢

**Clamps—**

Carriage Makers', Star, P., S. & W.  
Co., ..... 50¢  
Best, Parallel, ..... 35¢ @ 10¢  
Hammer & Co.:  
Adjustable ..... 20¢ @ 5¢  
Carriage Makers' H. P. Screw, 40¢ @ 5¢  
Myers' Hay Rack, ..... 50¢  
Lineman's Swedish Neverturn, ..... 45¢  
Saw Clamps, See Vises, Saw Filers.

**Cleaners, Drain,**

Iwan's Champion, Adjustable, ..... 50¢

Iwan's Champion, Stationary, ..... 40¢

**Sidewalk—**

American Fork & Hoe Co.:  
Star, 3/4 doz., Socket, \$4.00;  
Shank ..... \$3.50  
Shank, 3/4 doz., X 7/4, \$3.50; Shank,  
X 8 ..... \$3.75

**Cleavers, Butchers—**

Poster Bros., ..... 30¢

Fayette R. Plumb, ..... 30¢

L. & J. White Co., ..... 30¢

**Clippers, Horse and**

Chicago Flexible Shaft Co.:  
1902 Chicago Horse, each, \$10.75

20th Century Horse, each, \$5.00

Lightning Belt Horse, each, \$15.00

Chicago Belt Horse, each, \$20.00

Stewart's Enclosed Gear Roll

Bearing Horse, each, \$12.75

Stewart's New Model Sheep

Shearing Machine, each, \$12.75

Stewart Enclosed Gear Shear-

ing Machine, No. 8, each, \$9.75

**Clips, Axle—**

Regular Styles, list July 1, '05,  
80¢ @ 80¢ @ 10¢

**Cloth and Netting, wire**

—See Wire, &c.

**Cocks, Brass—**

Hardware Hat:

Plain Bibbs, Globe, Kerosene,

Racking, Liquor, Bottling,

&c ..... 75¢

Compression Bibbs, ..... 70¢

**Coffee Mills—**

See Mills, Coffee.

**Collars, Dog—**

Nickel Chain, Walter B. Stevens &  
Son's list, ..... 40¢

Leather, Walter B. Stevens & Son's  
list ..... 40¢

**Compasses, Dividers, &c.**

Ordinary Goods, ..... 75¢ @ 75¢ @ 5¢

**Conductor Pipe,—**

L. C. L. to Dealers:

Gal. Steel. Charcoal. Copper.

Northeastern: 70¢ @ 10¢ 50¢ @ 10¢ 7 1/2 50¢ @ 10¢

Eastern: 75¢ @ 10¢ 50¢ @ 10¢ 7 1/2 50¢ @ 10¢

Central: 75¢ @ 10¢ 60% 50¢ @ 10¢

Northwestern: 75¢ @ 10¢ 60% 50¢ @ 10¢

Western: 70¢ @ 10¢ 50¢ @ 12 1/2 50¢ @ 5%

Tennessee: 70¢ @ 10¢ 50¢ @ 12 1/2 50¢ @ 10%

Southern: 70¢ @ 10¢ 50¢ @ 12 1/2 50¢ @ 5%

Southwestern: 70¢ @ 10¢ 50¢ @ 5% 50¢ @ 5%

Terms, 60 days: 2% cash 10 days. Fac-

tory shipments generally delivered.

See also Eave Troughs.

**Coolers, Water—**

L. & G. Mfg. Co.:  
Gal. .... 2 3 4 6 8

Galvanized, ea. \$1.85 \$2.00 \$2.25 \$2.50 \$3.00

Galvanized, lined, side handles, ..... 10%

Gal. .... 2 3 4 6 8

Each ..... \$1.95 \$2.15 \$2.40 \$3.30 \$4.15

White Enamelled, ..... 10%

Agate Lined, ..... 10%

**Coppers' Tools—**

See Tools, Coppers.

**Coppers, Soldering—**

Soldering Coppers, 3 lb. to pair

and heavier, 2 1/2 lb.; lighter

than 3 lb. to pair, ..... 23¢ @ 5¢

**Cord—Sash—**

Braided, Drab, ..... 10. 35¢

Braided, White, Com., Nos. 8

to 12, 22¢; No. 7, 22¢; No. 6,

23¢. In lots of 12 doz. or

over, 1 cent less per pound.

Cable Laid Italian, 10, No. 18, 37¢

Italian, 10, A, No. 18, 25¢; B, 22¢

Common India, 10, 11¢ @ 11¢

Cotton Sash Cord, Twisted, 10¢ @ 20¢

Patent Russia, 10, 10¢ @ 20¢

Cable Laid Russia, 10, 21¢

India Hemp, Br'd'd., 10, 21¢

India Hemp, Twisted, 10, 13¢ @ 14¢

Patent India, Twisted, 10, 17¢

Pearl Braided, cotton, No. 6, 3/4 lb.

20¢; No. 7, 19¢; No. 8 to 12,

19¢, in 12 doz. to 100 doz. lots.

Eddystone, Braided, Nos. 8 to 12;

25¢; 6, 27¢

Harmony Cable Laid Italian, No. 7

to 10, ..... 10¢ @ 23¢

Pullman:

Wire Sash Cord, ..... 10¢

Sash Cord Attachments, per 100, \$2.00

Samson, Nos. 8 to 12:

Braided, 1/2 lb. Drab Cotton,

50¢; Italian Hemp, 40¢ @

50¢; Linen, 60¢; White Cotton,

50¢; Spot Cord, ..... 50¢

Massachusetts, White, 1/2 lb. 40¢

Massachusetts, Drab, 1/2 lb. 45¢

Phoenix, White, Nos. 8 to 12, ..... 27¢

Silver Lake, per lb., ..... 27¢

A. Drab, 45¢; A. White, 40¢;

B. Drab, 40¢; B. White, 35¢;

Italian Hemp, 40¢; Linen, ..... 57¢

See also Chain and Ribbon.

**Wire, Picture—**

Full Length, ..... 90¢ @ 2¢

Short Length, ..... 50¢ @ 20¢ @ 2¢

Hendryx Standard Wire Picture Cord,

old list, 85¢ @ 10¢

Turner & Stanton Co. Wire Picture

Cord ..... 30%

**Cradles—**

Grain ..... 50%

**Crayons—**

White Round Crayons, Cases, 100

gro., \$8.00, \$8.50, \$9.00 and \$10.00

according to grade.

Zelnicke's Lumber:

White and Purple, Indelible, \$7.50

Blue, Red, Green, Yellow and

Terra Cotta, \$6.50; Black, \$4.50

Giant Lumber, 9 1/2 in. x 15-16 in.,

round, all colors, \$12.00; Indel-

ible, \$14.00; Blacks, ..... \$10.00

Genuine Soapstone, Metal Workers',

5 in. x 3/4 in. Round, \$2.50; 5 in. x

3/4 in. Square, \$1.75; 5 x 1 1/2 x 3-16,

\$2.50; 5 x 1 1/2 x 3-16, ..... \$3.00

Supermark, Black, \$2.25; Blue, Red

and Yellow, ..... \$2.50

**Crooks, Shepherds—**

American Fork & Hoe Co.:  
Montana ..... 3/4 doz. \$1.50

**Crow Bars—See Bars, Crow.**

**Cultivators—**

American Fork & Hoe Co.:  
Victor, Garden, ..... 50¢ @ 10%

**Cutlery, Table—**

International Silver Company:  
No. 12 M'd'n Knives, 1847, 3/4 doz. \$3.50

10-lb. cans, 10 in case... 7¢ 7¢ 8¢  
 10-lb. cans, less than 10... 10¢ 10¢ 8¢  
 Less quantity... 10¢ 10¢ 8¢  
 NOTE.—In lots 1 to 3 tons a discount of 10% is given.

**Extensions, Bit—**  
 Ford's Auger Bit Extensions... 40¢ 5¢  
**Extractors, Lemon Juice—**  
 —See Squeezers, Lemon.

**Fasteners, Blind—**  
 Zimmerman's Jap'd and Galv., 50 & 5%  
 5%: Bronze and Plated... 50%  
 Walling's... 50%  
 Upson's Patent... 40%

**Cord and Weight—**  
 Ives, 1/2 doz., \$1.08... 10%  
 Titan, 1/2 doz., \$0.86... 10%

**Corrugated—**  
 Acme Corrugated Fasteners... 70%

**Faucets—**  
 Cork Lined... 50¢ 10¢ 60%  
 Metallic Key, Leather Lined... 60¢ 10¢ 70%

**Red Cedar... 40¢ 5¢ 10¢ 60%**  
**Petroleum... 70¢ 10¢ 75%**  
**B. & L. B. Co.:—**  
 Metal Key... 60¢ 10%  
 Star... 60%  
 West Look... 50¢ 10%  
 John Sommer's Peerless Tin Key... 50%  
 John Sommer's Boss Tin Key... 50%  
 John Sommer's Victor Mtl. Key... 50¢ 10%  
 John Sommer's Duplex Metal Key... 60%  
 John Sommer's Diamond Lock... 40%  
 John Sommer's I.X.L. Cork Lined... 50%  
 John Sommer's Reliable Cork Lined... 60%

John Sommer's Chicago Cork Lined... 60%  
 John Sommer's O. K. Cork Lined... 50%  
 John Sommer's No Brand, Cedar... 50%  
 John Sommer's Perfection, Cedar... 40%  
 Self Measuring:  
 Enterprise, Self Measuring and Pump, 1/2 doz., \$36.00... 40¢ 10%  
 Lane's, 1/2 doz., \$36.00... 40¢ 10%  
 National Measuring, 1/2 doz., \$36.00... 40¢ 10%

**Felice Plates—**  
 See Plates, Felice.

**Files— Domestic—**  
 List Nov. 1, 1899.  
 Best Brands... 70¢ 10¢ 75¢ 10%  
 Standard Brands... 75¢ 10¢ 80%  
 Lower Grade... 75¢ 10¢ 10¢ 80¢ 10%  
 Gold Medal... 70%  
 McCaffrey's American Standard... 60¢ 10¢ 10%

**Imported—**  
 Stubbs' Tapers, Stubbs' List, July 24, '97... 33 1/2¢ 40%

**Fixtures, Fire Door—**  
 Richards Mfg. Co.:  
 Universal, No. 103; Special, No. 104... 43.75  
 Fusible Links, No. 98... 60¢ 10%  
 Expansion Bolts, No. 107... 60¢ 10%

**Grindstone—**  
 Net Prices:  
 Inch... 15 17 19 21  
 Per doz... \$3.69 3.85 4.15 4.65  
 Peck, Stow & Wilcox Co.:  
 1/2 doz... 15 17 19 21  
 1/4 doz... 15 17 19 21  
 1/8 doz... 15 17 19 21  
 Reading Hardware Co... 60%

**Fodder Squeezers—**  
 See Compressors.

**Forks—**  
 American Fork & Hoe Co.:  
 Iowa Dig-Ezy Potato... 70¢ 5%  
 Hay, Regular, 3-time... 65¢ 10% 12%  
 Hay, Regular, 4-time... 60¢ 10% 12%  
 Champion, Hay... 60¢ 10% 12%  
 Acme, Hay... 60¢ 10% 12%  
 Manure, Regular, 4-time... 65¢ 10%  
 Manure, Regular, 5 and 6 time... 70%  
 Champion, Manure... 65¢ 10%  
 Acme, 4-time... 65¢ 10%  
 Round Shoulder Header, 4-time... 65%  
 Champion, Header... 65%  
 Dakota, Header... 65%  
 Kansas Header... 65%  
 Wood, Barley... 35¢ 5%  
 Steel, Barley... 65%  
 Columbia, Spading... 70¢ 7 1/2¢ 5%

**Frames— Wood Saw—**  
 White, 8' g't Bar, per doz. 75¢ 10%  
 Red, 8' g't Bar, per doz. \$1.00 10%  
 Red, Dbl. Brace, per doz. \$1.40 10%  
**Freezers, Ice Cream—**  
 Qt... 1 2 3 4 6  
 Each... \$1.25 \$1.00 \$1.20 \$2.20 \$2.80  
**Fruit and Jelly Presses—**  
 See Presses, Fruit and Jelly.

**Fry Pans—See Pans, Fry.**

**Fuse— Per 1000 Feet.**  
 Hemp... \$2.75  
 Cotton... 3.20  
 Waterproof Rgl. Taped... 3.65  
 Waterproof Dbl. Taped... 4.40  
 Waterproof Tpl. Taped... 5.15

**Gates, Molasses and Oil—**  
 Stebbins' Pattern... 80¢ 80¢ 45%

**Gauges—**  
 Marking, Mortise, &c... 50¢ 50¢ 10%  
 Chapin-Stephens Co.:  
 Marking, Mortise, &c... 50¢ 50¢ 10%  
 Dismont's Marking, Mortise, &c... 67 1/2%  
 Wire, Brown & Sharpe's... 33 1/2%  
 Wire, Morse's... 25%  
 Wire, P. S. & W. Co... 33 1/2%

**Gimlets— Single Cut—**  
 Numbered assortments, per gro.  
 Nail, Metal, No. 1, \$2.00; 2, \$2.30  
 Spike, Metal, No. 1, \$4.00; 2, \$4.30  
 Nail, Wood Handled, No. 1, \$2.30; 2, \$2.60  
 Spike, Wood Handled, No. 1, \$4.30; 2, \$4.60

**Glass, American Window**  
 See Trade Report.

**Glasses, Level—**  
 Chapin-Stephens Co... 65¢ 65¢ 10%

**Glue, Liquid Fish—**  
 Bottles or Cans, with Brush, 25¢ 10¢ 50%

**Grease, Axle—**  
 Common Grade... gro. \$6.00 65¢ 50  
 Dixon's Everlasting, 10-lb. pails, ea. 85¢; in boxes, 1/2 doz., 1 lb. \$1.20;  
 2 lb. \$2.00  
 Helmet Hard Oil... 25%

**Griddles, Soapstone—**  
 Pike Mfg. Co... 33 1/2¢ 33 1/2¢ 10%

**Grinders—**  
 Pike Mfg. Co.:  
 Hand and Foot Power, Pyko Nos. 1, 2, 3; Pyko Primo; Pyko Peerless; Pyko Spiral (foot power) 33 1/2%  
 Mower Knife and Tool, \$5.00... 40¢ 10%  
 Royal Mfg. Co.:  
 Alundum Grinding Machines, each, Nos. 01, \$1.75; 1A, \$2.50; 10, \$5.00... 30%  
 Alundum Sickle Grinders, each, Nos. 20, \$5.00; 20A, \$6.00; 20A, Combined, \$6.50... 30%  
 Alundum Disc Grinders, each, \$2.50... 30%

**Grindstones—**  
 Pike Mfg. Co.:  
 Improved Family Grindstones, 1/2 inch, 1/2 doz., \$2.00... 23 1/2%  
 Richards Mfg. Co., Eli and Cycle, Ball Bearing, mounted... 40%

**Grips, Nipple—**  
 Perfect Nipple Grips... 40¢ 10¢ 2%

**Halters and Ties—**  
 Cow Ties... 70%  
 Bridgeport Chain Co.:  
 Triumph Coil and Halters, 35¢ 2 1/2¢ 40%  
 Brown Coil and Halters... 50¢ 50% 45%  
 Brown Cow Ties... 50¢ 50% 45%  
 Brown Tie Outs... 70¢ 10¢ 75¢ 5%  
 Covert Mfg. Co.:  
 Web... 30¢ 22%  
 Jute Rope... 35%  
 Sisal Rope... 20%  
 Cotton Rope... 45%  
 Hemp Rope... 45%  
 Oneida Community:  
 Am. Coil and Halters... 40¢ 40¢ 5%  
 Am. Cow Ties... 45¢ 50%  
 Niagara Coil and Halters... 45¢ 50% 45%  
 Niagara Cow Ties... 45¢ 50% 45%

**Hammers—**  
 Heller's Machinists... 55¢ 10¢ 55¢ 10% 5%  
 Heller's Farriers... 40¢ 45¢ 10¢ 45%  
 Peck, Stow & Wilcox Co.:  
 Crucible Steel... 40¢ 10¢ 60%  
 Farriers'... 40¢ 10¢ 50%  
 Riveting... 40¢ 10¢ 50%  
 Machinists'... 60%  
 Blacksmiths'... 50%  
 Elmore Shoemakers' Hammers... 75%  
 Fayette R. Plumb:  
 A. E. Nail... 40¢ 2 1/2¢ 40¢ 12 1/2%  
 Eng. and B. S. Hand... 50¢ 10¢ 50¢ 45%  
 Machinists' Hammers... 60¢ 10¢ 45%  
 Rivet and Timmers... 40¢ 7 1/2¢ 40¢ 12 1/2% 5%  
 Victor Magnetic Tack, 1/2 doz... 37.75

**Heavy Hammers and Sledges—**  
 Under 3 lb., per lb., 50¢... 80¢ 10%  
 3 to 5 lb., per lb., 40¢... 80¢ 10¢ 10%  
 Over 5 lb., per lb., 30¢... 80%  
 Over 5 lb., per lb., 30¢... 80% 10¢ 10%

**Handles—**  
 Agricultural Tool Handles  
 Axe, Pick, &c... 60¢ 10¢ 60¢ 10% 5%  
 Hoe, Rake, &c... 40%  
 Fork, Shovel, Spade, &c... 40%  
 Long Handles... 40%  
 D Handles... 40%  
**Cross-Cut Saw Handles—**  
 Atkins... 40%  
 Champion... 50%  
 Dismont... 50%  
**Mechanics' Tool Handles—**  
 Auger, assorted... gro. \$3.00 45¢ 50  
 Brad Axl... gro. \$1.65 41.75  
 Chisel Handles, Ass'd, per gro.:  
 Tanged Firmer, Apple, \$2.40 40¢  
 \$2.65; Hickory... \$2.15 42.10  
 Socket Firming, Apple, \$1.75 40¢  
 \$1.95; Hickory... 1.60 41.75  
 Socket Framing, Hickory... 1.60 41.75  
 File, assorted... gro. \$1.50 41.40  
 Hammer, Hatchet, &c... 60¢ 10¢ 60¢ 10% 45%  
 Hand Saw, Varnished, doz., 80¢  
 85¢; Not Varnished... 65¢ 75¢  
**Plane Handles—**  
 Jack, doz., 30¢; Fore, doz... 45¢  
 Chapin-Stephens Co.:  
 Carving Tool... 30¢ 30¢ 10%  
 Chisel... 60¢ 60¢ 10%  
 File and Axl... 60¢ 60¢ 10%  
 Saw and Plane... 30¢ 30¢ 10%  
 Screw Driver... 30¢ 30¢ 10%  
 Millers Falls Adj. and Ratchet Auger Handles... 15¢ 10%  
 Nicholson Simplicity File Handle... 15¢ 10%  
 J. L. Osmond:  
 Indestructible File and Tool, 1/2 doz., No. 1, \$8.00; No. 2, \$9.50; No. 3, \$9.00; No. 4, \$9.50; No. 5, \$10.00... gro. lots 10%

**W. A. Zelnicher Supply Co.:—**  
 Hammer, 1/2 doz. 12 in., \$2.00;  
 14 in., \$2.00; 16 in., \$2.30; 18 in., \$2.50; 20 in., \$2.70; 22 in., \$3.00; 24 in., \$3.30; 26 in., \$3.50;  
 30 in., \$3.80.  
 Sledge, 1/2 doz., oval, 30 in., \$3.50; octagon, 30 in., \$3.80;  
 oval, 36 in., \$4.00; octagon, 36 in., \$4.00.  
 Axe, 1/2 doz., 28 to 34 in., \$3.60;  
 36 in., \$5.80.  
 Adze, 1/2 doz., 36 in., \$5.80; 36 in., \$7.80.  
 Pick, 1/2 doz., R. R., 36 in., \$8.00; coal, 31 in., \$5.80.  
 Hatchet, 1/2 doz., 12 to 14 in., \$2.00.

**Hangers—**  
 NOTE.—Barn Door Hangers are generally quoted per pair, without track and rollers. Door Hangers per double set with track, &c.

Chicago Spring Butt Co.:  
 Friction... 25%  
 Oscillating... 25%  
 Big Twin... 25%  
 Chisholm & Moore Mfg. Co.:  
 Baggage Car Door... 50%  
 Elevator... 30%  
 Railroad... 50%  
 Cronk & Carrier Mfg. Co.:  
 Loose Axle... 60¢ 10%  
 Roller Bearing... 70%  
 Griffin Mfg. Co.:  
 Solid Axle, No. 10, \$12.00... 60¢ 10%  
 Roller Bearing, No. 11, \$15.00... 60¢ 10%  
 Roller Bearing, Ex. Hy., No. 22, \$18.00... 60¢ 10%  
 Bull Dog, \$24.00... 70%  
 Lane Bros. Co.:  
 Parlor, Ball Bearing, \$1.00;  
 Standard, \$3.15; No. 105, \$2.85;  
 New Model, \$2.80; New Cham-  
 pion per set of 4 Hangers, com-  
 plete with track... \$2.25  
 Barn Door, Standard... 60¢ 10%  
 Hinged... net \$6.08  
 Covered... 60¢ 10%  
 Special... 70¢ 10%  
 Trolley Hangers and track... 50%  
 Lawrence Bros.:  
 Cleveland... 70¢ 7 1/2%  
 Clipper, No. 75... 60%  
 Crown... 60%  
 Cyclone, No. 40... net \$6.50  
 Tandem, No. 50... net \$7.50  
 New York... 55¢ 10%  
 Trolley, No. 30, 1/2 pair... \$1.25  
 McKinney Mfg. Co.:  
 Roller Bearing, Nos. 1 and 2, 70%  
 Axl-Friction... 60%  
 Hinged Hangers, King Charn... 60%  
 Richards Mfg. Co.:  
 Hangers, Nos. 47, 48, 147, 247... 60¢ 5%  
 Pioneer Wood Track, No. 3, \$2.25  
 Roller B'r'g St'l Track No. 12, \$2.20  
 Roller B'r'g St'l Track No. 13, \$2.50  
 Roller B'r'g, Nos. 39, 70¢ 7 1/2%

Hero, Adj. Track No. 19, \$4.10 10%  
 Adjustable Track Tandem Trol-  
 ley Track No. 16... 50¢ 10%  
 Seal, Steel Track No. 8... \$2.25  
 Auto Adj. Track No. 22, \$2.50 5%  
 Trolley B. D. No. 17, \$1.25; F. D. No. 120, \$2.25; No. 121, \$2.50;  
 No. 150... \$2.50  
 Safety Underwriters F. D. No. 101... 40%  
 Tandem No. 41, 2 1/2 and 3 1/2 10%  
 Palace, Adjustable Track No. 132... 50¢ 5%  
 Royal, Adjustable Track No. 122... 50¢ 10%  
 Ives Wood Track No. 1... \$2.25  
 Trolley B. D. No. 20... 50¢ 10%  
 Trolley B. D. No. 24, \$1.30; No. 27, \$1.40; No. 28... \$1.60  
 Roller Bearings, Nos. 37, 38, 39, 41, 43, 44, Sizes 1 and 2, 70¢ 7 1/2%  
 Anti-friction, No. 42; No. 44... sizes 2 1/2 and 3... 60%  
 Hinged Tandem No. 48... 60¢ 45%  
 Folding Door B. B. Swivel No. 135... 40%  
 Taylor & Boggs Fry Co.'s Kid-  
 der's Roller Bearing, 1/2 doz, 4 in., \$12.00; 5 in., \$14.00... 40¢ 10%  
 Myers Stayon Hangers... 60%

**Hangers— Garment—**  
 Pullman Trouser, 1/2 doz., No. 1 \$9.00; No. 4, \$24.00; No. 5, \$16.50;  
 No. 8, Black Enamel, \$7.50; No. 10, \$21.00; No. 12, \$8.00; No. 13, Rods, \$9.00; No. 18, Loops... \$10.00  
 Victor Folding... 1/2 doz. \$9.60

**Gate—**  
 Myers Patent Gate Hangers, 1/2 doz., net... 50%

**Joist and Timber—**  
 Lane Bros. Co... 35%

**Hasps—**  
 Griffith's Security Hasp... 50¢ 10%  
 McKinney's Perfect Hasp, 1/2 doz... 60%

**Hatchets—**  
 Regular list, first qual. 50¢ 50¢ 10%  
 Second quality... 50¢ 10¢ 60%

**Heaters, Carriage—**  
 Clark, No. 5, \$1.25; No. 5B, \$1.60; No. 3, \$1.75; No. 3D, \$2.00; No. 7D, \$2.25;  
 No. 3E, \$2.50; No. 1, \$3.00... 25%  
 Clark Coal, 1/2 doz., \$0.75... 20%

**Hinges—**  
 Blind and Shutter Hinges  
 Surface Gravity Locking Blind:  
 Doz. Sets with Fastenings, No. 1, \$0.70; No. 3, \$1.25; No. 5, \$2.65.  
 Mortise Shutter... 80%  
 Mortise Reversible Shutter... 80%  
 North's Automatic Blind Fixtures, No. 2, for Wood, \$9.00; No. 3, for Brick, \$11.50... 10%  
 Charles Parker Co... 70¢ 75%  
 Parker Wire Goods Co.  
 Hale & Benjamin Automatic Blind Hinges... 20%  
 Hale's Blind Awning Hinges, No. 110, for wood, \$9.00; No. 111, for brick, \$9.00... 20%

Reading's Gravity... 60%  
 Stanley's Steel Gravity Blind Hinges, No. 1647 1/2, 1/2 doz., sets, without screws, \$0.35; with screws, \$1.25.  
 Wrightsville Hardware Co.:  
 O. S. Lull & Porter... 75¢ 45%  
 Acme, Lull & Porter... 75%  
 Queen City Reversible... 75%  
 Shepard's Noiseless, Nos. 60, 65, 65... 75¢ 45%  
 Niagara Gravity Locking, Nos. 1, 3 & 5... 75¢ 45%  
 Clark's O. P., No. 1... 75¢ 10%  
 Clark's O. P., Nos. 3 and 5... 75¢ 45%  
 Tip Pat'n., No. 1... 75¢ 10%  
 Clark's No. 3... 75¢ 45%  
 Buffalo Gravity Locking, Nos. 1, 3 & 5... 70¢ 10¢ 45%  
 Shepard's Double Locking... 75%  
 Champion Gravity Locking... 75¢ 45%  
 Pioneer... 75%  
 Empire... 65%  
 W. H. Co.'s Mortise Gravity Locking, No. 2... 60¢ 10%

**Gate Hinges—**  
 Clark's or Shepard's—Doz. sets:  
 No. 1... 1 2 3  
 Hinges with L't'chs... \$2.00 2.70 5.00  
 Hinges only... 1.25 1.90 3.50  
 Latches only... 70 75 35  
 New England:  
 With Latch... doz... \$2.00  
 Without Latch... doz... \$1.60  
 Reversible Self-Closing:  
 With Latch... doz... \$1.75  
 Without Latch... doz... \$1.55  
 Western:  
 With Latch... doz... \$1.75  
 Without Latch... doz... \$1.15  
 Wrightsville Hardware Co.:  
 Shepard's or Clark's Hinges and Latches, Hinges only or Latches only, Nos. 1, 2 or 3... 70%

**Miscellaneous—**  
 Griffin Mfg. Co., Fleur de Lis Sur-  
 face Hinges, 1/2 doz., prs... \$1.00

**Pivot Hinges—**  
 Bommer Bros. Pivot, Ball Bear-  
 ing... 40%  
 Lawson Mfg. Co., Matchless... 30%

**Spring Hinges—**  
 Holdback, Cast Iron... \$6.75 47.00  
 Non-Holdback, Cast Iron... \$6.50 46.75  
 J. Bardsley:  
 Bardsley's Non-Checking Mor-  
 tise Floor Hinges... 40%  
 Bardsley's Patent Checking... 33 1/2%  
 Bommer Bros.:  
 Spring Butt Hinges... 40%  
 Surface Floor, Ball Bear-  
 ing... 40%  
 Mortise Floor, Ball Bearing... 40%  
 Lavatory Hinges... 40%  
 Non-Holdback Screen Door,  
 No. 2000 and 900... 40%  
 Holdback Screen Door, No. 900... 40%  
 Chicago Spring Butt Co.:  
 Chicago Spring Hinges... 25%  
 Triple End Spring Hinges... 50%  
 Chicago (Ball Bearing) Floor... 50%  
 Garden City Engine House... 25%  
 Keene's Saloon Door... 25%  
 Columbian Hardware Co.:  
 Acme, Wrought Steel... 30%  
 Acme, Brass... 25%  
 American... 30%  
 Columbia, 1/2 gr., No. 14, \$9.00;  
 No. 18... \$25.00  
 Columbia, Adj., No. 7, 1/2 gr. \$12.00  
 Gem, new list... 30%  
 Clover Leaf and Acorn, per  
 gr... \$12.00  
 Oxford, new list... 30%  
 Floor Spring Hinges... 30%  
 Columbian Steel... 65¢ 10%  
 Lawson Mfg. Co.:  
 Matchless Spring Hinges... 30%  
 Matchless Jamb Hinges... 30%  
 Richards Mfg. Co.:  
 Superior Double Acting Floor  
 Hinges... 40%  
 Shelby Spring Hinge Co.:  
 Buckeye All Steel Holdback  
 Screen Door... 1/2 gr. \$9.00  
 Chief Ball Bearings Floor  
 Hinge... 50%  
 Ball Bearing Door... 25%  
 No. 777, Sheet Steel Holdb'k,  
 1/2 gr. \$1... \$9.00  
 Standard Mfg. Co.:  
 Champion Double Acting Door  
 Hinge... 25¢ 10¢ 10%  
 Standard Double Acting Floor  
 Hinge... 25¢ 10¢ 10%  
 Superior Spring Hinge Co.:  
 Superior Floor Hinges... 40%  
 Spring Hinges... 40%

**Wrought Iron Hinges—**  
 Strap and T Hinges, &c., list  
 February 10, 1908:  
 Light Strap Hinges... 50¢ 10%  
 Heavy Strap Hinges... 60¢ 10%  
 Light T Hinges... 50%  
 Heavy T Hinges... 40%  
 Extra Hvy. T Hinges... 50¢ 10%  
 Hinge Hasps... 33 1/2%  
 Cor. Heavy Strap... 60¢ 5%  
 Cor. Ez. Heavy T... 50¢ 10%  
 Screw Hook... 6 to 12 in. 1b. 3 1/2¢  
 and Strap... 1 1/2 to 20 in. 1b. 3 1/2¢  
 22 to 23 in. 1b. 3 1/2¢  
 Screw Hook and Eye:  
 3/4 to 1 inch... 1b. 6 1/2¢  
 1 1/4-inch... 1b. 7 1/2¢  
 1 3/4-inch... 1b. 8 1/2¢

**Hitchers, Fall—**  
 Covert Mfg. Co., Stall Hitchers... 30¢ 2%

**Hods— Coal—**  
 M'for's list, price per gross:  
 Inch... 13 16 17 18  
 Galv. Open... \$35 \$39 \$42 \$46  
 Jap. Open... 26 28 31 33  
 Galv. Funnel... 43 48 52 56  
 Jap. Funnel... 33 36 39 43

**Masons' Etc.**  
 Cleveland Wire Spring Co.:  
 Steel Brick, No. 162... each \$1.05  
 Steel Mortar, No. 153... each \$1.35

Extra 10% often given on most of these Hinges.



**Hoes— Eye —**  
**Scovill and Oval Pattern.**  
 Grob, list Feb. 23, 1899.  
 D. & H. Scovill.  
 Am. Fork & Hoe Co. (Scovill Pat-  
 tern) .....

**Handled—**  
 Cronk's Weeding, No. 1, \$2.00; No. 2, \$2.50  
 Star Double Bit .....

**Hoisting Apparatus—**  
 See Machines, Hoisting.

**Holders— Bit—**

Angular,  $\frac{1}{2}$  doz. \$21.00.....45&10%  
 Bardale's, Iron, 40%; Brass and  
 Bronze .....

**File and Tool—**  
 Nicholson File Holders and File  
 Handles .....

**Fruit Jar—**  
 Triumph Fruit Jar Holder,  $\frac{1}{2}$  gross,  
 \$18.00;  $\frac{1}{2}$  doz. ....

**Trace and Rein—**  
 Fernald Double Trace Holder,  $\frac{1}{2}$  d  
 pairs .....

**Hones—Razor—**  
 Pike Mfg. Co., Belgian and Swat,  
 50%; German .....

**Hooks—Cast Iron—**  
 Bird Cage, Reading .....

**Wire—**  
 Belt, Nos. 1 to 15 .....

**Wrought Iron—**  
 Box, 6 in., per doz., \$0.90; 8 in.,  
 \$1.15.

**Cotton —**  
 Wrought Staples, See Wrought Goods.

**Miscellaneous—**  
 Hooks, Bench, see Steps, Bench.

**Grass, best, all sizes, per doz.,**  
 \$2.75 to \$3.00.

**Grass, common grades, all sizes,**  
 per doz. ....

**Whiffletree —**  
 Hooks and Eyes .....

**Brass —**  
 Malleable Iron .....

**Covert Mfg. Co. Gate and Scuttle**  
 Hooks .....

**Turner & Stanton Co. Cup and**  
 Shoulder .....

**Bench Hooks—See Bench Stops.**  
 Corn Hooks—See Knives, Corn.

**Horse Nails—**  
 See Nails, Horse.

**Horseshoes—**  
 See Shoes, Horses.

**Hose, Rubber—**  
 Garden Hose,  $\frac{1}{4}$  inch:

**Competition —**  
 3-ply Guaranteed .....

**Cotton Garden,  $\frac{1}{4}$  in., coupled:**  
 Low Grade .....

**Bar and Corner—**  
 Richards Mfg. Co., Bar, 60&10%;  
 Corner .....

**Pinking—**  
 Pinking Irons .....

**Irons, Soldering**  
 See Coppers.

**Jacks, Wagons—**  
 Covert Mfg. Co.:

**Auto Screw —**  
 Lane's Steel .....

**Richards' Heavy Steel, No. 131, 50&10%**  
 Smith & Henshaw Co.'s .....

**Jointers—**  
 Pike Mfg. Co., Saw Jointers, \$7.00..42%

**Kettles—**  
 Brass, Spun, Plain .....

**Knives—**  
 Butcher, Kitchen, &c.—

**Corn—**  
 Columbian Cutlery Co., Wilent  
 Brand Knives and Hooks .....

**Easy Cut,  $\frac{1}{2}$  doz., No. 10 C H.**  
 Acme,  $\frac{1}{2}$  doz. ....

**Adjustable, Serrated,  $\frac{1}{2}$  doz.**  
 Serrated,  $\frac{1}{2}$  doz. ....

**Yankee, No. 1 C H.**  
 Yankee, No. 2 C H. ....

**Drawing—**  
 Standard List .....

**C. E. Jennings & Co., Nos. 45, 46,**  
 Jennings & Griffin, Nos. 41, 42, .....

**Swan's —**  
 Watrous .....

**Hay and Straw—**  
 Serrated Edge, per doz. \$5.00 to \$5.50

**Iwan's Sickle Edge —**  
 Iwan's Serrated .....

**Miscellaneous—**  
 Farriers' .....

**Knobs—**  
 Base,  $\frac{1}{4}$ -inch, Birch or Maple,  
 Rubber Tip .....

**Door, Mineral —**  
 Door, Por. Jap'd .....

**Door, Por. Nickel —**  
 Richards' Wood Door, Shutters, &c. 15%

**Lacing, Leather—**  
 See Belting, Leather

**Ladders, Store, & —**  
 Lane's Store .....

**Ladles, Melting—**  
 L. & G. Mfg. Co., Melting and  
 Plumbers' .....

**Lamps—**  
 Hammer's M. I. Hand .....

**Lanterns—Tubular—**  
 Regular, No. 0 .....

**Side Lift, No. 0 —**  
 Hinge Globe, No. 0 .....

**Bull's Eye Police—**  
 3-inch .....

**Latches—Thumb—**  
 Roggin's Latches, Jap'd, with  
 Screws .....

**Door—**  
 Cronk & Carrier Mfg. Co., No. 101,  
 Richards' Bull Dog, Heavy, No. 123 .....

**Leaders, Cattle—**  
 Small .....

**Leathers, Pump—**  
 Lifters, Transom .....

**Lines—**  
 Wire Clothes, Nos. 13 19 20  
 100 feet .....

**Samson Cordage Works:**  
 Solid Braided Chalk, Nos. 0 to 3.40;  
 Solid Braided Masons' .....

**White Cotton, No. 3 $\frac{1}{2}$ , \$1.50; No. 4,**  
 \$2.00; No. 4 $\frac{1}{2}$ , \$2.50; Colors, No. 3 $\frac{1}{2}$ ,  
 \$1.75; No. 4, \$2.25; No. 4 $\frac{1}{2}$ , \$2.75;  
 Linen, No. 3 $\frac{1}{2}$ , \$2.50; No. 4, \$3.50;  
 No. 4 $\frac{1}{2}$ , \$4.50 .....

**Tent and Awning Lines: No. 5,**  
 White Cotton, \$7.50; Drab Cotton,  
 \$8.50 .....

**Clothes Lines, White Cotton: 50 ft.,**  
 \$2.75; 60 ft., \$3.25; 70 ft., \$3.75; 75  
 ft., \$4.00; 80 ft., \$4.25; 90 ft., \$4.75;  
 100 ft., \$5.25 .....

**Turner & Stanton Co.:**  
 Solid Braided Chalk, Masons' and  
 Awning Lines .....

**Locks— Cabinet—**  
 Cabinet Locks .....

**Door Locks, Latches, &c.—**  
 NOTE—Net Prices are very often made  
 on these goods.

**Reading Hardware Co. ....**  
 R. & E. Mfg. Co. ....

**Padlocks—**  
 R. & E. Mfg. Co., Wrought Steel and  
 Brass .....

**Saf , &c.—**

**Ives' Patent —**  
 Automatic Gravity Metal Sash,  $\frac{1}{2}$   
 gro., \$149.58 .....

**Window Ventilating —**  
 Pullman Patent Ventilating Lock .....

**Machines—Boring—**  
 Com. Upr't, without Augers, .....

**Com. Angl'r, without Augers, ..**  
 Ford Auger Bit Co. ....

**Jennings' Nos. 1 and 4. ....**  
 Millers' Falls .....

**Snell's, Upright, \$2.65; Angular, \$2.90**  
 Swan's Improved .....

**Corking—**  
 Reisinger Invinible Hand Power .....

**Williams' Fence Machines, each, \$5.50**  
 Hoisting—

**Moore's Anti-Friction Chain Hoist, 30%**  
 Moore's Hand Hoist, with Lock .....

**Moore's Cyclone High Speed Chain**  
 Hoist .....

**Ice Cutting—**  
 Chandler's .....

**Washing —**  
 Boss Washing Machine Co.: Per doz.

**Standard Champion No. 1, ..**  
 Standard Perfection .....

**Cincinnati Square Western, ..**  
 Uneda American, Round .....

**Mallets—**  
 Hickory .....

**Mangers, Stable—**  
 Sweet Iron Works .....

**Mats, Door—**  
 Acme Flexible Steel .....

**Mattocks—**  
 See Picks and Mattocks.

**Mills, Coffee, &c.—**  
 Enterprise Mfg. Co.:

**Shell and Corn. ....**  
 National list Jan. 1, 1902 .....

**Parker's Columbia and Victoria, ..**  
 Parker's Box and Side .....

**Swift, Lane Bros. Co. ....**  
 Motors, Water—

**Divine's Red Devil, ..**  
 No. 1, 2, 3, 4 .....

**Lippincott's: 1 2 3 4**  
 No. ....

**Pike Mfg. Co., Tool and Knife**  
 Grinding .....

**Mowers, Lawn—**  
 NOTE—Net prices are generally quoted

**Cheapest, 10-in., \$2.00; advance**  
 10¢ for each size.

**Cheap, 10-in., \$2.25; advance 15¢**  
 20¢ for each size.

**Better Grade, 10-in., \$3.00; ad-**  
 vance 25¢ for each size.

**High Grade, ..**  
 Continental .....

**Great American ..**  
 Great American Ball B'r'g, new list .....

**Pennsylvania, Jr., Ball Bearing,**  
 Pennsylvania Golf .....

**Pennsylvania Horse ..**  
 Pennsylvania Pony .....

**Nails—**  
 Wire Nails and Brads, Miscel-

**aneous —**  
 Cut and Wire. See Trade Report.

**Hungarian, Finishing, Upholster-**  
 ers', &c. See Tacks.

**Horse—**  
 Nos. 6 7 8 9 10

**Anchor ..**  
 Coleman ..

**New Haven ..**  
 Livingston ..

**Hot Pressed: Off list.**

**Square ..**  
 Hexagon ..

**Oakum—**  
 Best .....

**Oil—**  
 Pike Mfg. Co., Stonoil .....

**Oil Tanks—See Tanks, Oil.**  
 Oilers—

**Steel, Copper Plated ..**  
 Chase or Paragon .....

**Brass and Copper ..**  
 Zinc .....

**Railroad ..**  
 Malleable, Hammers' Improved, Nos.  
 11, 12 and 13, 10%; Old Pattern,  
 Nos. 1, 2, 3, 4, 50%.

**American Tube & Stamping Co.:**  
 Spring Bottom Cans .....

**Railroad Oilers, &c. ....**  
 Maple City Mfg. Co.:

**Spring Bottom Cans ..**  
 Railroad Oilers, &c. ....

**Openers—Packing Box—**  
 Hercules,  $\frac{1}{2}$  doz., \$21. ....

**Can Openers—**  
 Sprague, Iron Handle .....

**Sprague, Wood Handle ..**  
 Sardine Scissors .....

**Can and Bottle Openers,  $\frac{1}{2}$  doz.,**  
 net: Yankee .....

**Gem, \$0.50 to \$0.65; Nifty, ..**  
 Egg—

**Hartigan Nickel Plate,  $\frac{1}{2}$  doz., \$2.00;**  
 Silver Plate, \$4.00.

**Packing—**  
 Asbestos Packing, Wick and  
 Rope, any quantity .....

**Rubber—**  
 (Fair quality goods.)

**Sheet, C. I. ....**  
 Sheet, C. O. S. ....

**Sheet, C. B. S. ....**  
 Sheet, Pure Gum .....

**Sheet, Red ..**  
 Jenkins' "98,  $\frac{1}{2}$  lb. 8¢ .....

**Miscellaneous—**  
 American Packing .....

**Cotton Packing ..**  
 Italian Packing .....

**Jute ..**  
 Russia Packing .....

**Pails, Water, Well, &c.—**  
 See Buckets.

**Paint—**  
 Dixon's Silica-Graphite, in 1 gal.  
 pails and 5 gal. kegs, 25%; pack-

**ages of larger size ..**  
 Pans— Dripping—

**Standard List ..**  
 Edwards, Royal Blue .....

**Fry—**  
 Common Lipped:

**Nos. ....**  
 Per doz. ....

**Refrigerator, Galva.—**  
 Inch .....

**Per doz. ....**  
 Paper—Building Paper

**Asbestos: 1b.**  
 Roll Board or Building Felt,  
 6 to 30 lb., per 100 sq. ft., 2 $\frac{1}{2}$ ¢

**Roll Board or Building Felt,**  
 3-32 and  $\frac{1}{4}$  in., 45 to 60 lb.,  
 per 100 sq. ft., .....

**Mill Board, Sheet, 40 x 40 in.,**  
 1-32 to  $\frac{1}{4}$  in. ....

**Rosin Sized Sheathing: 500 sq. ft.**  
 Light weight, 25 lbs. to roll, .....

**Medium weight, 30 lbs. to roll,**  
 Heavy weight, 40 lbs. to roll, .....

**Black Water Proof Sheathing,**  
 500 sq. ft., 1 ply, 65¢; 2 ply,  
 85¢; 3 ply, \$1.10; 4 ply, \$1.25.

**Deafening Felt, 9, 6 and 4 $\frac{1}{2}$  sq.**  
 ft. to lb., ton .....

**Red Rope Roofing, 250 sq. ft.**  
 per roll .....

**Tarred Paper—**  
 1 ply (roll 400 sq. ft.), ton, .....

**2 ply, roll 108 sq. ft., ..**  
 3 ply, roll 108 sq. ft., .....

**Slaters' Felt (roll 500 sq. ft.) 80¢**  
 Sand Paper and Cloth—

**Flint and Emery ..**  
 Garnet Paper and Cloth .....

**Parers—Apple—**  
 Goodell Co.:

**Family Bay State ..**  
 Improved Bay State .....

**Yarn Table ..**  
 White Mountain .....

**Ronanza Improved ..**  
 Dandy .....

**Eureka Improved ..**  
 New Century .....

**Ranger ..**

Livingston Nail Co.:	doz.	\$4.00
Daisy	doz.	\$5.00
Little Star	doz.	\$5.20
Rocking Table	doz.	\$6.20
Reading Hardware Co.:		
Advance	doz.	\$4.00
Baldwin	doz.	\$4.00
Reading 72	doz.	\$3.25
Reading 78	doz.	\$6.25

<b>Orange—</b>		
Goodell Co., Success	each	\$20.00
<b>Potato—</b>		
Saratoga	doz.	\$7.00
White Mountain	doz.	\$6.00

<b>Picks and Mattocks—</b>		
(List Jan., 1908.)		
List	doz.	75¢ to 10%
Cronk's Handled Garden Mattock	doz.	\$3.00
		33%

<b>Pinking Irons—</b>		
See Irons, Pinking.		
<b>Pins, Escutcheon—</b>		
Brass	50¢ to 50¢ to 10%	
Iron, list Nov. 11, '85	50¢ to 60¢ to 10%	

<b>Pipe, Cast Iron Soil—</b>		
Eastern Prices:		
Standard, 2-6 in.	68 1/2%	
Extra Heavy, 2-6 in.	74 1/2%	
Fittings, Standard and Heavy	81 1/2%	

<b>Pipe, Merchant—</b>		
Carloads to Consumers:		
Steel		
Blk. Galv. Blk. Galv.		
1/2 and 3/4 in.	60	64
1 in.	63	68
1 1/4 in.	70	75
2 in.	74	78
3 to 12 in.	71	80

<b>Pipe, Vitrified Sewer—</b>		
Carload lots.		
Standard Pipe and Fittings, 3 to 24 in., f.o.b. factory:		
First-class	87%	
Second-class	90%	

<b>Pipe, Stove—</b>		
Per 100 joints.		
Edwards' Nested:		
5 in., Standard Blue	\$6.25	\$7.25
6 in., Standard Blue	6.75	7.75
7 in., Standard Blue	7.75	8.75
8 in., Royal Blue	7.00	8.00
6 in., Royal Blue	7.50	8.50
7 in., Royal Blue	8.50	9.50
Wheeler's Corrugating Co., Nested:		
5 in., Uniform Color	\$5.90	\$6.90
6 in., Uniform Color	6.40	7.40
7 in., Uniform Color	7.40	8.40

<b>Planes and Plane Irons—</b>		
<b>Wood Planes—</b>		
Bench, first qual.	30¢ to 40¢ to 10%	
Bench, second qual.	40¢ to 50¢ to 10%	
Molding	25¢ to 35¢ to 10%	
Chapin-Stephens Co.:		
Bench, First Quality	30%	
Bench, Second Quality	40%	
Molding and Miscellaneous	25%	
Toy and German	30%	
Union	40%	

<b>Iron Planes—</b>		
Chapin's Iron Planes	60%	
Union	60%	
<b>Plane Irons—</b>		
Wood Bench Plane Irons, list Dec. 13, '06	25%	
Buck Bros.	30%	
Chapin-Stephens Co.	25%	
Union	50%	
L. & J. White	20¢ to 25%	

<b>Planters, Corn, Hand—</b>		
Kohler's Eclipse	doz.	\$7.50
<b>Plates—</b>		
Felco	lb.	3¢ to 4¢
Avery Stamping Co.:		
Standard Wrot. Steel Felco Plates in 100 lb. kegs, per 100 lb., 1/4-in. to 1 1/4-in., \$4.00 net; 1 1/4-in. to 2-in., inclusive, \$3.75 net.		

<b>Steel Pipe Hook—</b>		
Never-Break	75¢ to 10%	
<b>Pliers and Nippers</b>		
Button Pliers	75¢ to 85¢ to 10¢ to 5%	
Gas Burners, per doz., 5 in.	\$1.25	
Gas pipe, 7	8	12-in.
	\$2.00	\$2.25

<b>Acme Nippers</b>	50¢ to 5%	
Cronk & Carrier Mfg. Co.:		
American Button	60%	
Improved Button	75¢ to 10%	
Cronk's	50%	
No. 80 Linemen's	50%	
Stub's Pattern	45%	
Combination and others	33 1/2%	
Elmore Tool Mfg. Co.:		
Gas Pliers	70%	
Wire and Cutting Pliers	75%	
Heller's Farriers' Nippers, Pincers and Tools	40¢ to 50¢ to 10¢ to 5%	
P. S. & W. Tinnors' Cutting Nippers	40%	
Swedish Side, End and Diagonal Cutting Pliers	50%	
Utica Drop Forge & Tool Co.:		
Pliers and Nippers, all kinds	40%	

<b>Plumbs and Levels—</b>		
Chapin-Stephens Co.:		
Plumbs and Levels	30¢ to 40¢ to 10%	
Chapin's Imp. Brass Cor.	40¢ to 50¢ to 10%	
Pocket Levels	30¢ to 40¢ to 10%	
Extension Sights	30¢ to 40¢ to 10%	
Machinists' Levels	40¢ to 50¢ to 10%	
Diston's Plumb and Levels	60¢ to 10%	
Diston's Pocket Levels	50¢ to 10%	
Stanley's Duler	50%	
Woods' Extension	33 1/2%	

<b>Points, Glaziers—</b>		
Bulk and 1-lb. papers	lb.	9¢
1/2-lb. papers	lb.	9 1/2%
1/4-lb. papers	lb.	10¢

<b>Pelice Goods—</b>		
Manufacturers' Lists	25¢ to 35¢ to 5%	
Tower's	25%	

<b>Pelish—Metal, Etc—</b>		
Ladd Co.:		
Putzade Liquid, gro., 1/2 pta.	\$12.00; 1 pta., \$20.00; 1 qta., \$40.00.	
doz., 1/2 gals., \$6.35; 1 gal., \$12.00.		
Prestoline Liquid, No. 1 (1/2 pt.),	doz., \$3.00; No. 2 (1 qt.), \$5.00.	
Prestoline Paste	doz., \$5.00.	
George William Hoffman:		
U. S. Metal Polish Paste, 3 oz. boxes,	doz., 50¢; gro., \$4.50.	
1/2 lb. boxes, doz., \$1.25; 1 lb. boxes, doz., \$2.25.		
U. S. Liquid, 3 oz. cans, doz., \$1.25.		
Barkeepers' Friend Metal Polish, doz., \$1.75.		

<b>Stove—</b>		
Black Eagle Benzine Paste, 5 lb. cans,	doz., 10¢	
Black Eagle, Liquid, 1/2 pt. cans,	doz., 75¢	
Black Jack Paste, 1/2 lb. cans, gro., \$2.00.		
Black Kid Paste, 5 lb. cans, each, \$0.65.		
Ladd's Black Beauty Liquid, per 100 tins,	\$5.75.	
Joseph Dixon, gro., \$5.75.		
Dixon's Plumbago	gro., \$2.50	
Fireside	gro., \$2.50	
Gem, gro., \$4.50.		
Japanese	gro., \$3.50	
Jet Black	gro., \$3.50	
Peerless Iron Enamel, 19 oz. cans,	doz., \$1.50	

<b>Window Polish—</b>		
Benj. P. Forbes:		
Glasbrite, No. 2, gal. pails, doz., \$24.00; each, \$2.50; 1 lb. cans, each		
Glasbrite Powder, bibls., doz., 20¢.		

<b>Poppers, Corn—</b>		
1 qt. Square, doz., \$0.80; gro., \$8.75.		
1 qt. Round, doz., \$0.90; gro., \$10.00.		
1 1/2 qt. Square, doz., \$1.20; gro., \$12.00.		
2 qt. Square, doz., \$1.50; gro., \$15.00.		

<b>Post Hole and Tree Augers and Diggers—</b>		
See also Diggers, Post Hole, &c.		

<b>Posts, Steel—</b>		
Steel Fence Posts, each, 6 ft., 46¢; 6 1/2 ft., 48¢; 7 ft., 50¢.		
Steel Hitching Posts, each \$1.30.		

<b>Potato Parers—</b>		
See Parers, Potato.		

<b>Pots, Glue—</b>		
Enameled	doz., 40%	
Tinned	doz., 30¢ to 10%	

<b>Powder—</b>		
Black Sporting:		
Keps (25 lb.), \$5.00 to \$5.50		
Half Keps (12 1/2 lb.), \$2.75 to \$3.00		
Quarter Keps (6 1/4 lb.), \$1.50 to \$1.65		
Canisters, pounds, .25		
Canisters, 1/2 pounds, .15		
Canisters, 1/4 pounds, .12		

<b>NOTE—Prices vary according to territory.</b>		
<b>King's Semi-Smokeless:</b>		
Keg (25 lb. bulk)	\$4.50	
Half Keg (12 1/2 lb. bulk)	\$3.50	
Quarter Keg (6 1/4 lb. bulk)	\$1.90	
Case 24 (1 lb. cans bulk)	\$4.50	
Half case (1 lb. cans bulk)	\$4.50	
King's Smokeless: Shot Gun, Rifle,		
Keg (25 lb. bulk)	\$12.00 to \$13.00	
Half Keg (12 1/2 lb. bulk)	6.25 7.75	
Quarter Keg (6 1/4 lb. bulk)	3.25 4.00	
Case 24 (1 lb. cans bulk)	14.00 17.00	
Half case 12 (1 lb. c. bk.)	7.25 8.75	

<b>Presses—</b>		
Fruit, Wine and Jelly—		
Enterprise Mfg. Co.	20¢ to 25%	

<b>Seal Presses—</b>		
Morrill's No. 1, doz., \$20.00	50%	

<b>Pruning Hooks and Shears</b>		
See Shears.		

<b>Pullers, Nail, Etc.—</b>		
Cyclops	50%	
Elmore Tool Mfg. Co.:		
Drop Forged Tack Pullers	10%	
Nail Pullers	40%	
Miller's Falls, No. 3, doz., \$12.00.		
	33 1/2% to 50%	
Morrill's No. 1, Nail Puller, doz., \$30.00		
Pearson No. 1, Cyclone Spike Puller, each \$30.00		
The Scranton Co. Case Lots:		
No. 2B (large)	\$5.50	
No. 3B (small)	\$5.00	
Smith & Hemenway Co.:		
Diamond B.	70%	
Giant	50%	
Staple Pullers, Utica and Davidson	60%	
Taylor Mfg. Co., Sampson Tack,	doz., \$0.40	

<b>Pulleys, Single Wheel—</b>		
Inch	1/2 1/4 3/8 1/2	
Acrotting or Tackle,		
doz., \$0.30 15 60 1.05		
Hay Fork, Swivel or Solid Eye, doz., 1/2 in., \$1.25; 5 in., \$1.55.		
Inch	2 3/4 1/4	
Hot House, doz., \$0.65 35 1.20		
Inch	1/4 1/2 1/4	
Screw, doz., \$0.16 19 23 30		
Inch	2 2 1/4 2 1/4	
Slide, doz., \$0.25 10 55 80		
Inch	1/4 1/4 1/4 2 1/2	

<b>Sash Pulleys—</b>		
Common Frame: Square or Round End, per doz., 1/4 and 2 in.		
Anger Mortise, no Face Plate, per doz., 1/4 and 2 in.	20¢ to 21¢	

<b>Acme, No. 35, 1 1/2 in., 19¢; 2 in., 20 1/2¢</b>		
<b>American Pulley Co.:</b>		
Wrought Steel American Plain	50¢ to 10%	
Axle		
Wrought Steel, Eagle, doz., 1 1/2 in., 17¢; 2 in., 20¢; 2 1/2 in., 24¢.		
Top Notch, Electrically Welded, Nos. 3 and 4, doz., 19¢.		
Common Sense, doz., 20¢.		
Merit, doz., 2 1/2 in., 37¢.		
Fox-All-Steel, Nos. 3 and 7, 2 in.		
Grand Rapids All Steel Noiseless, Niagara, No. 25, 1 1/2 in., 19¢; 2 in., 20 1/2¢.		
No. 26 Troy, 1 1/2 in., 14 1/2¢; 2 in., 16 1/2¢.		
Star, No. 26, 1 1/2 in., 19¢; 2 in., 20 1/2¢.		
Tackle Blocks—See Blocks.		

<b>Pumps—</b>		
Cistern	doz., 60%	
Pitcher Spout	75¢ to 10¢ to 80	
Wood Pumps, Tubing, &c.	50%	
Barnes Dbl. Acting (low list)	50%	
Barnes Pitcher Spout	80%	
Contractors' Rubber Diaphragm, No. 2, B. & L. Block Co.	\$16.00	
Daisy Spray Pump	doz., \$6.50	
Flint & Walling's Fast Mail Hand (low list)	50¢ to 5%	
Flint & Walling's Fast Mail (low list)	50¢ to 5%	
Flint & Walling's Tight Top	80%	
Pitcher	80%	
National Specialty Mfg. Co., Measuring, Nos. 2, \$6.00; 3, \$6.50.		
Myers' Pumps (low list)	30%	
Myers' Power Pumps	50%	
Myers' Spray Pumps	50%	

<b>Pump Leathers—</b>		
Plunger and Valve Leathers—Per gro.:		
No.	1 2 3 4	
	\$5.00 6.00 7.00 8.00	
Cup Leathers—Per 100:		
Inch	2 1/2 3 3 1/2 4	
	\$5.00 7.00 9.00 12.00	

<b>Punches—</b>		
Saddlers' or Drive, good, doz., 50¢ to 75¢.		
Spring, single tube, good quality	17.75	
Revolving (4 tubes)	doz., \$3.50	
Bemis & Call Co.'s Cast Stl Drive	50%	
Elmore Tool Mfg. Co.:		
Machinists' Center	40%	
Tinners' Solid, 50%; Prick	50%	
Morrill's Nos. 1A, 1A, 1B, 1C, 1D, \$15.00.		
Hercules 1 die, each \$5.00	50%	
Niagara Hollow Punches	40%	
Niagara Solid Punches	55¢ to 10%	
Tinners' Hollow, P. S. & W. Co., 40%		
Tinners' Solid, P. S. & W. Co., doz., \$1.41.	40¢ to 10%	

<b>Rail—Barn Door, &amp;c.—</b>		
Sliding Door, Painted Iron,	2 1/2¢ to 2 1/2¢	

<b>Sliding Door, Wrought Iron,</b>		
1/4 in., lb., 36¢	30%	

<b>Cronk's:</b>		
Double Braced Steel Rail, 1/2 ft. 2 1/2¢		
O. N. T. Rail	2 1/2¢	
Griffin's:		
xxx, 100 ft., 1 x 3-16 in., \$3.25;		
1 1/4 x 3-16 in., \$3.75.		
Hinged Hanger, 100 ft., 1 x 3-16 in., \$3.50; 1 1/4 x 3-16 in., \$4.00.		
Lane's:		
Hinged Track, 100 ft.	\$3.45	
O. N. T., 100 ft., 1 in., \$3.12 1/2;		
1 1/4 in., \$3.45; 1 1/2 in., \$4.00.		
Standard, 1 1/4 in., 100 ft. \$4.00		
Lawrence Bros.:		
1 x 3-16 in., 100 ft., \$7.50; 1 1/4 x 3-16 in., \$8.75.		
Trolley No. 301, 100 ft.	\$9	
McKinney's:		
Hinged Hanger Track, 1/2 ft., 1 1/4		
1 x 3-16 Track	55¢ to 5%	
Myers' Stayon Track	60¢ to 5%	
Richards Mfg. Co.:		
Common, 1 x 3-16 in., \$3.00; 1 1/4 x 3-16, \$3.25; 1 1/2 x 3-16, \$3.50.		
Special Hinged Hanger Rail, 60¢ to 10%		
Lag Screw Rail, No. 65	50%	
Gauge Trolley Track, 1/2 ft. No. 31, 9¢; No. 31, 1 1/4¢; No. 33, 20¢.		
No. 50	60¢ to 10%	
No. 51, \$3.00; 61, \$3.25; 63, \$3.50; 64, \$4.00; 65, \$3.25; 66, \$3.50; 67, \$4.00; 68, \$4.50; 69, \$5.00.		

<b>Rakes—</b>		
NOTE—Many goods are sold at net prices.		

<b>American Fork &amp; Hoe Co.:</b>		
Lawn, doz., No. 24, \$2.50; No. 25, \$2.75.		
Cronk's:		
Steel Garden: Champion, doz., 12-tooth, \$3.75; 14-tooth, \$4.00; 16-tooth, \$4.25; Ideal, doz., 12-tooth, \$3.00; 14-tooth, \$3.50; 16-tooth, \$3.80.		
Victor, 16-tooth, \$2.75; 14-tooth, \$2.50; 12-tooth, \$2.25.		
Queen City Lawn, doz., 20 teeth, \$2.85; 24, \$3.00.		
Anticlog Lawn, doz., \$4.00		
Malleable Garden	70¢ to 10%	
Ideal Steel Garden, doz., 12 teeth, \$3.00; 14, \$16.00; 16, \$18.00.		
Kohler's:		
Jumbo Lawn, 36-tooth, doz., \$5.00		
Lawn Queen, 20-tooth, doz., \$2.85		
Lawn Queen, 24-tooth, doz., \$3.00		
Paragon, 20-tooth, doz., \$2.65		
Paragon, 24-tooth, doz., \$2.75		
Steel Garden, 14-tooth, doz., \$2.40		
Malleable Garden, 14-tooth, doz., \$1.75 to \$2.00		

<b>Rasps, Horse—</b>		
Diston's	75%	
Heller Bros.	75%	
Liveright Bros.' Gold Medal	70¢ to 75%	



**Sausage Stuffers or Fillers**See *Stuffers or Fillers, Sausage.***Saw Frames—**See *Frames, Saw.***Saw Sets—See Sets, Saw.****Saw Tools—See Tools, Saw.****Saws—**

Atkins':  
Circular ..... 45%  
Band ..... 50@50.10  
Butcher Saws ..... 50%  
Cross Cuts ..... 50%  
One-Man Cross Cut ..... 50%  
Narrow Cross Cut ..... 50%  
Hand Rip and Panel ..... 35.5%  
Miter Box and Compass ..... 40%  
Mulay, Mill and Drag ..... 45%  
Wood Saws ..... 40.10%  
Chapin-Stephens Co.:  
Turning Saw and Frames, 30@30.10%  
Diamond Saw and Stamping Works: 30.10@10%  
Sterling Kitchen Saws ..... 30.10@10%

Diston's:  
Circular, Solid and Inset Tooth, 50%  
Band, 2 to 18 in. wide ..... 50%  
Band, 14 to 18 in. wide ..... 60%  
Crosscuts ..... 45%  
Narrow Crosscuts ..... 50%  
Mulay, Mill and Drag ..... 50%  
Framed Wood Saws ..... 25%  
Wood Saw Blades ..... 25%  
Wood Saw Rods, Tinned ..... 15%  
Hand Saws, Nos. 12, 99, 9, 15, d100, 12, 10, 76, 77, 8 ..... 25%  
Hand Saws, Nos. 1, 107, 107.5, 3, 0, 0, Combination ..... 25%  
Compass, Key Hole ..... 25%  
Butcher Saws and Blades ..... 30%  
C. E. Jennings & Co.'s:  
Back Saws ..... 16%  
Butcher Saws ..... 25.7%  
Compass and Key Hole ..... 33.7%  
Framed Wood Saws ..... 25.7%  
Hand Saws ..... 12%  
Wood Saw Blades ..... 33.7%  
Millers Falls:  
Butcher Saws ..... 15.10%  
Star Saw Blades ..... 15.10%  
Massachusetts Saw Works:  
Victor Kitchen Saws ..... 40.10@50%  
Butcher Saws and Blades ..... 30.40%  
Pease & Richardson's Hand Saws, 30%  
Simonds':  
Circular Saws ..... 45%  
Crescent Ground Cross Cut Saws, 50%  
One-Man Cross Cut ..... 40.10%  
Gang Mill, Mulay and Drag Saws, 45%  
Band Saws ..... 50%  
Back Saws ..... 25@25.7%  
Butcher Saws ..... 25@25.7%  
Hand Saws ..... 25@25.7%  
Hand Saws, Bay State Brand ..... 45%  
Compass, Key Hole, & ..... 25.7%  
Wood Saws ..... 40.7%  
Wheeler, Madden & Clemons' Co.'s Cross Cut Saws ..... 50%

**Hack Saw Blades and Frames—**

Atkins' Hack Saw Blades A A A ..... 25%  
Diston's:  
Concave Blades ..... 25%  
Keystone Blades ..... 30%  
Hack Saw Frames ..... 30%  
Simonds, 25%: The Best, 35%  
Culley ..... 35%  
C. E. Jennings & Co.'s:  
Hack Saw Frames, Nos. 175, 180 ..... 40.7%  
Hack Saws, Nos. 175, 180, complete ..... 40.7%  
Goodell's Hack Saw Blades ..... 40.10%  
Griffin's Hack Saw Frames, 35.5@10%  
Griffin's Hack Saw Blades ..... 35.5@10%  
Star Hack Saws and Blades ..... 15.10%  
Sterling Hack Saw Blades, 30.10@5%  
Sterling Hack Saw Frames, 30.10@10%  
Sterling Power Hack Saw Machines, each, No. 1, \$25.00; No. 2, \$30.00, 10%  
Victor Hack Saw Blades ..... 30%  
Victor Hack Saw Frames ..... 40%  
Whitaker Mfg. Co.:  
National Hand Blades, Hand Frames, Power Blades ..... 40%  
Scroll—  
Barnes, No. 7, \$15 ..... 25%  
Barnes' Scroll Saw Blades ..... 40%  
Barnes' Velocipede Power Scroll Saw, without boring attachment, \$30 ..... 15%  
Lester, complete, \$10.00 ..... 15.10%  
Rogers, complete, \$3.50 and \$4.00, 15.10%

**Seales—**

Union Platform, Plain, \$2.10 @ 2.20  
Union Platform, Std., \$2.20 @ 2.30  
Chatillon's:  
Eureka ..... 25%  
Favorite ..... 45%  
Grocers' Trip Scales ..... 50%  
The Standard Portables ..... 40%  
The Standard R. H. and Wag-

**Scrapers—**

Boz, 1 Handle ..... doz. \$1.85 @ 2.10  
Boz, 2 Handle ..... doz. \$2.35 @ 2.50  
Ship, Light, \$2.00; Heavy, \$4.50  
Chapin-Stephens Co., Box, 30@30.10%  
Richards Mfg. Co., Foot, 30@30.10%

**Screws—Bench and Hand**

Bench, Iron, doz, 1 in., \$2.50 @ 2.75; 1 1/4, \$3.00 @ 3.25; 1 3/4, \$3.50 @ 3.75  
Bench, Wood ..... 70@70.10%  
Hand, Wood ..... 70@70.10%  
Chapin-Stephens Co., Hand, 70@70.10%  
Coach, Lag and Hand Rail—  
Lag, Cone Point ..... 80.45%  
Coach, Gimlet Point ..... 80%  
Hand Rail ..... 70.10@75%

**Jack Screws—**

Standard List ..... 70.10@75%  
Millers Falls ..... 70.10@10%  
Swett Iron Works ..... 70.75%

**Machine—**

Out Tread, Iron, Brass or Bronze:  
Flat Head or Round Head, 50@50.10%  
Fillister Head ..... 50@50.10%  
Rolled Thread, F. H. or R. H., Iron ..... 75.10%  
F. H. or R. H., Brass, Nos. 8 to 14 ..... 65.10%

**Set and Cap—**

Set (Iron) ..... 75.10@77.5%  
Set (Steel), net advance over Iron ..... 25%  
Sq. Hd. Cap ..... 70.10@71.5%  
Hex. Hd. Cap ..... 70.10@71.5%  
Rd. Hd. Cap ..... 50.7%  
Fillister Hd. Cap ..... 60.7%

**Wood—**

List July 23, 1903.

Flat Head, Iron ..... 87.45@  
Round Head, Iron ..... 85.50@  
Flat Head, Brass ..... 80.45@  
Round Head, Brass ..... 77.45@  
Flat Head, Bronze ..... 75.50@  
Round Head, Bronze ..... 72.45@  
Drive Screws ..... 87.45@

**Scroll Saws—**See *Saws, Scroll.***Scythes—**

Per doz.

Plain Grass, Cutting Edge Polished ..... \$6.25 @ \$6.50  
Clipper, Bronzed Web, \$6.50 @ \$6.75  
Solid Steel, Web and Backs Polished ..... \$7.00 @ \$7.25  
Bush, Weed and Bramble, Painted ..... \$6.50 @ \$6.75  
Grain, Painted, Cutting Edge Polished ..... \$8.25 @ \$8.50  
Clipper Grain, Bronze Web ..... \$8.50 @ \$8.75

**Seeders, Raisin—**

Enterprise ..... 25@30%

**Sets—Awl and Tool—**

Fray's Tool Handles, Nos. 1, \$12; 2, \$16; 3, \$12 ..... 50%  
Millers Falls Adj. Tool Handles, No. 1, \$12; No. 4, \$12; No. 5, \$18, 20.10%

**Garden Tool Sets—**

American Fork & Hoe Co.:  
Rake, Shovel and Hoe, # doz, sets, No. 3 P. F. ..... \$7.25

**Sets, Nail—**

Octagon ..... gro. \$3.50 @ 3.75  
Buck Bros ..... 25%  
Elmore Tool Mfg. Co. ..... 30%  
Mayhew's ..... gro. \$9.00  
Snell's Corrugated, Cup Pt. ..... 40.10%  
Snell's Knurled, Cup Pt. ..... 40.10%  
Victor Knurled, Cup Pt. ..... gro. \$7.50

**Regular Hat—**

75@75.10%

**Saw—**

Atkins':  
Criterion ..... 40%  
Adjustable ..... 40%  
Diston's Star, Monarch and Triumph ..... 30%  
Morrill's No. 1 ..... \$15.00  
Nos. 3 and 4, Cross Cut ..... \$20.00  
No. 5, Mill ..... \$30.00  
Nos. 10, 11, 95 ..... \$15.00  
No. 1 Old Style ..... \$10.00  
Special ..... \$12.25  
Giant Royal Cross Cut ..... doz. \$4.50  
Royal Hand ..... doz. \$4.50  
Taintor Positive ..... doz. \$6.75

**Shaving—**

Fox Shaving Sets, No. 20 ..... 30 doz., net, \$24.00  
Smith & Hemenway Co.'s ..... 75%

**Sharpeners, Knife—**

Pike Mfg. Co.:  
Fast Cut Pocket Knife Hones, # doz. ..... \$1.50  
Mounted Kitchen Sand Stone, # doz. ..... \$1.50  
Natural Grit Carving Knife Hones, # doz. ..... \$3.00  
Quick Cut Emery Carving Knife Hones, # doz. ..... \$1.50  
Quick Edge Pocket Knife Hones, # doz. ..... \$2.50

**Skate—**

Smith &amp; Hemenway Co., Eureka, 50%

**Shaves, Spoke—**

Iron ..... doz. \$1.25  
Wood ..... doz. \$2.00  
Bailey's (Stanley R. & L. Co.) ..... 45%  
Chapin-Stephens Co. ..... 30@30.10%  
Goodell's, # doz, \$3.00 ..... 15.10%

**Shears—**

Cast Iron, 7 8 9 in.  
Best ..... \$16.00 18.00 20.00 gro.  
Good ..... \$13.00 15.00 17.00 gro.  
Cheap ..... \$5.00 6.00 7.00 gro.  
Straight Trimmers, &c.:  
Best quality Jap. ..... 70.10@75%  
Best quality Nickel ..... 60.10@65%  
Tailors' Shears ..... 40@40.10%  
Acme Cast Shears ..... 40@40.5%  
Heinrich's Tailors' Shears ..... 10%  
National Cutlery Co.'s Nickel Plated, 60.10%; Japan Handles, 70.10%  
Columbian Cutlery Co.:  
Sheep, 1900 list ..... 30.10@5%  
Grass ..... 50.10%  
Horse or Mule ..... 50.10%  
J. Wiss & Sons Co.:  
Best Quality Jap'd ..... 60.10%  
Best Quality Nickle ..... 50.10%  
Tailors' ..... 25%

**Tinners' Snips—**

Steel Blades ..... 20.45@20.10%  
Steel Laid Blades ..... 30.10%  
Acme Cast Snips ..... 40@45%  
Forged Handles, Steel Blades, Berlin ..... 50%

Heinrich's Snips ..... 40%  
Jennings & Griffin Mfg. Co.'s 6 1/2 to 10 in. ..... 33.45@7.5%  
National Cutlery Co.'s Forged Steel ..... 50%  
Niagara Snips ..... 40%  
P. S. & W. Forged Handles, 25%  
W. W. W. Forged Steel ..... 25%  
J. Wiss & Sons Co.:  
Wiss Forged Steel ..... 25%

**Pruning Shears—**

Cronk's Hand Shears ..... 33.4%  
Cronk's Wood Handle Shears ..... 33.4%  
Diston's Combined Pruning Hook and Saw, # doz, \$18.00 ..... 25%  
Diston's Pruning Hook only, # doz, \$12.00 ..... 25%  
J. T. Henry Mfg. Co.:  
Pruning Shears, all grades ..... 40%  
P. S. & W. Co. ..... 40.10%  
Columbian Cutlery Co.:  
Hedge, Wilcut Brand ..... 60.10%  
Lawn and Border, Wilcut Brand, 60.10%

**Sheaves—Sliding Door—**

Reading list ..... 40%  
R. & E. list ..... 15%

**Sliding Shutter—**

Reading list ..... 40%  
R. & E. list ..... 15%

**Shells—Shells, Empty—**

Brass Shells, Empty:  
Climax, 10 and 12 gauge ..... 60.45%  
Club, Rival, 65.45%; First Quality, 60.45%

**Paper Shells, Empty—**

New Rapid, 10, 12, 16 and 20 gauge, 25.10%  
Climax, 10 and 12 gauge; Acme and Magic, 10, 12, 16 and 20 gauge; Ideal, 10, 12, 16 and 20 gauge; Leader grade, 10 and 12 gauge; Union, League, 10 and 12 gauge; Rival grade, 10, 12, 14, 16 and 20 gauge; Climax, 14, 16 and 20 gauge; Monarch, 10, 12, 16 and 20 gauge; League, Union, 14, 16 and 20 gauge; Repeater Grade, 20%

**Shells, Loaded—**

Loaded with Black Powder, 40%  
Loaded with Smokeless Powder, medium grade ..... 40.45%  
Loaded with Smokeless Powder, high grade ..... 40.10@10%  
Union Metallic Cartridge Co.:  
New Club, Black Powders ..... 40%  
Nitro Club, Smokeless Powders, 40.45%  
Arrow, Smokeless Powders, 40.10@10%  
Winchester:  
Smokeless Repeater Grade ..... 40.45%  
Smokeless Leader Grade, 40.10@10%  
Black Powder ..... 40%

**Shingles, Metal—Per Sq.**

Edwards Mfg. Co.:  
Painted, Galv.  
14 x 20 ..... \$1.25 \$6.00  
10 x 11 ..... 4.50 6.25  
7 x 10 ..... 4.75 6.50  
Wheeling Corrugating Co.:  
Dixie, 14 x 20 in. ..... \$4.05 \$6.05  
Dixie, 10 x 14 in. ..... 4.25 6.45  
Dixie, 7 x 10 in. ..... 5.25 6.70

**Shoes, Horse, Mule, &c.—**

F.o.b. Pittsburgh:  
Iron ..... per keg \$4.10  
Steel ..... per keg \$3.85  
Burdens', all sizes ..... per keg \$3.90

**Shot—**

25-lb. bag.  
Drop, up to B ..... \$1.70  
Drop, B and larger ..... 1.95  
Rice ..... 1.95  
Chilled ..... 1.95  
Dust ..... 2.30

**Shovels and Spades—**

Association List, 40.7% @ 40.10%  
Avery Stamping Co. ..... 40%

**Snow Shovels—**

Long Handle ..... \$2.50 @ 2.75  
Wood and Mail, D Handle, \$2.65 @ 2.90

**Sieves and Sifters—**

Hunter's Imitation, gro. .... \$9.50  
Hunter's Genuine, per gro. .... \$12.00

**Sifters, Ash—**

Acme Ball Bearing Sales Co., Acme Automatic Ash Sifter, each, \$3.25; # doz. ..... \$39.00

**Sieves, Seamless Metallic**

Mesh ..... # 10 18 20  
Iron Wire ..... \$1.05 1.05 1.10 1.20  
Tinned Wire, \$1.15 1.15 1.20 1.30

**Sieves, Wooden Rim—**

Nested, 10, 11 and 12 Inch.  
Mesh 18, Nested ..... doz. \$0.90 @ 0.95  
Mesh 20, Nested ..... doz. \$1.00 @ 1.05  
Mesh 24, Nested ..... doz. \$1.30 @ 1.40

**Sinks, Cast Iron—**

Painted, Standard List:  
13 x 13 to 22 x 30 in. .... 60%  
20 x 24 to 24 x 30 in. .... 50%  
24 x 30 to 24 x 120 in. .... 30%  
Barnes' low list ..... 60%  
NOTE—There is not entire uniformity in lists used by jobbers.

**Skains, Wagon—**

Cast Iron ..... 70@75.10%  
Steel ..... 40@45%

**Slates, School—**

Factory Shipments.  
"D" Slates ..... 50@50.10%  
Eureka, Unexcelled Noiseless, 60.47 tens.  
Victor A, Noiseless, 60.47 tens 65%

**Slaw Cutters—See Cutters.****Snaps, Harness—**

German ..... 40@40.10%  
Covart Mfg. Co.:  
Derby, 25%; Yankee, 30.2%; Yankee Roller, 30.2%  
High Grade, 40%; Trojan ..... 40%  
Jockey ..... 25%

**Snaths—**

Grass Scythe ..... 50@50.45%

**Snips, Tanners—See Shears.****Spoons and Forks—****Silver Plated—**

Good Quality ..... 50.10@60.45%  
Cheap ..... 60@60.10%  
International Silver Co.:  
1947 Rogers Bros. .... 40.10%  
Rogers & Bro., William Rogers Eagle Brand ..... 50.10%  
Anchor, Rogers Brand ..... 60%  
Wm. Rogers & Son ..... 60.10%

**Miscellaneous**

German Silver ..... 60@60.45%

**Tinned Iron—**

Teas ..... per gro. 50@55%  
Tables ..... per gro. \$0.90 @ \$1.00  
Atlas Mfg. Co.:  
Tea Spoons, # gro. .... 50@55%  
Table Spoons, # gro. .... \$0.90 @ \$1.00

**Springs—Door—**

Bardsley's Spring and Check ..... 40%  
Chicago (Coll) ..... 40.10%  
Gem (Coll) ..... 20%  
Pullman Door and Gate ..... 10%  
Reliance (Coll) ..... 40.10%  
Star (Coll) ..... 35%  
Torrey's Rod, 30 in. .... \$4.00

**Carriage, Wagon, &c.—**

1 1/2 in. and Wider: Per 100 lb.  
Black ..... \$4.75 @ \$5.00  
Half Bright ..... \$4.75 @ \$5.00  
Bright ..... \$5.25 @ \$5.50  
Painted Seat Springs:  
1 1/2 x 2 x 26 ..... per pair \$4.45 @ 47¢  
1 1/2 x 3 x 28 ..... per pair \$6.68 @ 71¢

**Sprinklers, Lawn—**

American Foundry & Mfg. Co.:  
Cactus, 60%; Japanese, 70%; National, # doz ..... \$12.00  
Enterprise ..... 25@30%  
Philadelphia No. 1, # doz, \$12; No. 2, \$15; No. 3, \$20 ..... 30%

**Squares—**

Nickel plated, } List Jan. 5, 1900,  
Steel and Iron, } 80@80.10%  
Rosewood Hdl. Try Square and T-Bevels ..... 60.45@10.70%  
Iron Hdl. Try Squares and T-Bevels ..... 40.10@10.10%  
Diston's Try Squares and Bevels, Rosewood Handle, 60 & 10%; Iron Stock and Bevel ..... 15%

**Squeezers, Lemon**

Wood, Porcelain Lined:  
Cheap ..... doz. \$1.00  
Good Grade ..... doz. \$1.25  
Tinned Iron ..... doz. \$0.75 @ 1.00  
Iron, Porcelain Lined ..... doz. \$1.75  
Victor, # gro. .... \$3.00

**Staples—**

Barbed Blind ..... 85.65 @ 85.10%  
Electricians ..... 80.60 @ 80.10%  
Fence Staples, Polished, \$2.05;  
Galvanized ..... \$2.35  
Poultry Netting Staples ..... per lb. 3/4 @ 3/4¢

**Steels, Butchers—**

Dick's ..... 30%  
Foster Bros. .... 30%

**Steelyards—**

30@30.10%

**Stocks and Dies—**

Blacksmiths' ..... \$0.50 @ 0.10%  
Curtis Rev'ble Ratchet Die Stock ..... 25%  
Derby Screw Plates ..... 25%  
Green River ..... 25%  
Lightning Screw Plate ..... 25%  
Little Giant ..... 25%  
Reece's New Screw Plate ..... 25%

**Stoners, Cherry—**

Enterprise ..... 25@30%

**Stones, Axe—**

Pike Mfg. Co., Axe Stones (all kinds) ..... 33.4%  
Glass Cutters' Stones—  
Pike Mfg. Co., Glass Cutters' Stones and Supplies ..... 40%

**Stones, Oil, &c.—**

Pike Mfg. Co., 1907 list, # lb.  
Arkansas St. No. 1, 3 to 5 in. \$2.80  
Arkansas St. No. 1, 5 1/4 to 8 in. \$3.50  
Arkansas Slips No. 1 ..... \$1.00  
Lily White Washita, 4 to 8 in. 60¢  
Rose Red Washita, 4 to 8 in. 60¢  
Washita St., Extra, 4 to 8 in. 50¢  
Washita St., No. 1, 4 to 8 in. 45¢  
Washita St., No. 2, 4 to 8 in. 45¢  
Lily White Slips ..... 90¢  
Rose Red Slips ..... 90¢  
Washita Slips, Extra, 4 to 8 in. 80¢  
Washita Slips, No. 1 ..... 70¢  
Washita Slips, No. 2 ..... 40¢  
India Oil Stones (entire list) ..... 33.4%  
Quickcut Emery and Corundum Oil Stone, Double Grit ..... 60%  
Quickcut Emery and Corundum Axe Stone, Double Grit ..... 33.4%  
Quickcut Emery Rubbing Brick ..... 60%  
Hindustan No. 1, R. G. Tar, 10 lb. 8¢  
Hindustan No. 1, Small, # lb. 10¢  
Turkey Oil Stones, Extra, 4 to 8 in. 20¢  
Queer Creek Stones, 4 to 8 in. 20¢  
Queer Creek Slips ..... 60%  
Sand Stone ..... 60%





